Idaho Climate-Economy Impacts Assessment Human Health Supplemental Report

Steve Peterson¹

¹Clinical Associate Professor of Economics, College of Business and Economics, University of Idaho

Recommend citation: Peterson, S. 2021. Human Health Supplemental Report. *Idaho Climate-Economy Impacts Assessment*. James A. & Louise McClure Center for Public Policy Research, University of Idaho. Boise, ID

Key Messages

- Idaho ranked 49th in active physicians per capita (2018). Idaho had approximately 3,200 physicians in 2021, with about 300 openings per year from physician turnover.
- There has been recent expansion of medical education programs and there are plans to expand further the number of residency and fellowship programs.
- In 2020, Idaho's health care sector paid \$5.3 billion in wages and benefits and supported 91,511 total direct jobs.
- Total Idaho gross health care spending in 2014 (the most recent year available) was \$10.8 billion, the equivalent of 17.6% of Idaho's gross state product (GSP).
- Annual Idaho per capita health care expenditures were \$6,927 (2014; the most recent year available).
- Idaho has a total of 45 hospitals, including private, state, and federal, which tend to be situated in urban counties.

1. Idaho's Health Care Landscape

Physicians

Idaho ranked 49th in active physicians per capita (2018) (Association of American Medical Colleges (AAMC), 2019). Idaho had approximately 3,200 physicians in 2021, with about 300 openings per year (EMSI, 2021). In 2017, the average annual physician salary and benefits were \$214,379 per year, ranking Idaho 22nd in the U.S (Becker's Hospital Review, n.d.). Physicians licensed in other states can obtain licensure in Idaho to provide telehealth services within the state (Idaho Board of Medicine).¹ However, a portion of this requirement was waived during the pandemic.²

Recent expansions in the WWAMI medical education program, Idaho's contract with the University of Utah School of Medicine, and opening of the Idaho College of Osteopathic Medicine (ICOM) are increasing the number of physicians educated in Idaho (WWAMI, 2021).³ Specifically, the WWAMI

¹ This can be expedited through the Interstate Medical Licensure Compact.

² Idaho Code 54-1804(1)(d) sets forth a licensure exemption.

³ WWAMI is a cooperative program with the University of Washington to provide a physician education program in the states of Washington, Wyoming, Alaska, Montana, and Idaho.

medical education program increased the number of seats from 35 to 40,⁴ the state of Idaho and the University of Utah School of Medicine have a contract that ensures 10 Idaho residents are accepted to the School of Medicine each year (University of Utah School of Medicine, 2021), and ICOM will graduate its first class in 2022 (ICOM, 2021). Each ICOM class has approximately 150 students (ICOM, 2021).

The number of medical residency slots in Idaho is approximately 140. Including residents and fellows, the number approaches 180; the number of residents and fellows is an important benchmark. Over 54% of practitioners who completed medical residency training are practicing in the state of residency training (data from 2008 through 2017; AAMC, 2021). The Idaho WWAMI program's rate of return (WWAMI Idaho graduates returning to practice in the state) is over 50%. The percentage of physicians retained in Idaho when considering both undergraduate and graduate medical education is 69%, as of 2018, the most recent year available (AAMC, 2019). Currently, residency programs in Idaho are available in family medicine, internal medicine, and psychiatry; rural focus is emphasized in some programs (Idaho Board of Education, 2017). Fellowship programs also include sports medicine, HIV/viral hepatitis, geriatrics, and obstetrics (Idaho Board of Education, 2017). Length varies by residency area of training and fellowship program. Idaho residency and fellowship programs are not available at present in a variety of specialties, such as surgery, oncology, and ophthalmology. There are plans to expand the number of residency and fellowship opportunities in Idaho from 9 to 21 programs, ~140 to 356 residents and fellows, and the number of graduates each year from Idaho's medical education programs (Idaho Board of Education, 2017).⁵

Health care professions

Overall, 81,806 were directly employed in health care professions in Idaho (2020) as measured by occupation. Health care organizations hired 48,037 employees and had 45,128 separations. The average turnover rate for 2020 was 55%, compared to 46% for U.S. health care professions overall. Median salary and benefits for all health care employees were \$48,854, compared to the U.S. at \$53,788 (EMSI, 2020). Table 1 provides additional details, including jobs, hires, separations, turnover rates, and median pay and benefits in Idaho compared to the U.S. median.

Description	Jobs	Hires	Separations	Turnover Rate ID	Turnover Rate U.S.	ID Median Pay/Benefits	U.S. Median Pay/Benefits
Physicians/Skilled Nurses	28,998	7,694	6,733	23%	22%	\$79,024	\$85,871
Technologists/Technicians	14,644	6,316	5,883	40%	38%	\$42,329	\$45,558
HC Trainers/Practitioners	438	127	106	24%	26%	\$43,485	\$51,954
Nursing Assistants/Aides	27,389	27,143	26,352	96%	73%	\$25,639	\$28,048
Therapy Assistants	1,069	807	701	66%	66%	\$42,261	\$52,994
Other Support	9,268	5,949	5,352	58%	56%	\$34,383	\$36,810
Total	81,806	48,037	45,128	55%	46%	\$48,854	\$53,788

Table 1: 2020 Health care occupational metrics, Idaho and U.S. (EMSI, 2020).

⁴ Beginning with the 2016-17 academic year.

⁵ Details about residency, fellowship, and education programs, as well as the 10-year plan for growth: <u>https://boardofed.idaho.gov/wp-content/uploads/2018/01/Graduate-Medical-Education-10yr-Plan.pdf</u>

In 2020, health care in Idaho constituted about \$6.3 billion in gross state product (GSP). This included \$5.3 billion in wages and benefits and 91,511 in total direct jobs (Table 2).⁶ The health care sector in Idaho was about 7.6% of Idaho 2020 GSP (at the time of this data series). This does not capture total Idaho health care; the numbers include only net in-state expenditures in Idaho (EMSI, 2021) and do not include Idaho residents who sought health care services outside Idaho and all other Idaho health care expenditures made out-of-state. Total Idaho health care spending in 2014 (within state and out-of-state; the most recent year available) was \$10.8 billion, the equivalent of 17.6% of Idaho's 2014 GSP.⁷

Industry	GSP	Jobs	Wages/Benefits	Average Wages/Benefits
Ambulatory Health Care	\$3,316,566,779	50,440	\$2,818,153,913	\$55,871
Hospitals	\$2,340,426,411	24,804	\$1,952,545,448	\$78,719
Nursing/Residential Care	\$665,139,610	16,267	\$570,825,172	\$35,091
Total	\$6,322,132,799	91,511	5,341,524,533	\$48,191

Table 2: 2020 Gross State Product (GSP), jobs, and income metrics for Idaho's health care providers (EMSI, 2020).

Annual Idaho per capita health care expenditures were \$6,927, ranking 6th lowest in 2014 (most recent year) among the 50 states. This may be attributed to cost of living and per capita incomes in Idaho. For example, in 2014 Idaho's spending was 63% of Alaska's per capita spending (the highest state) and below the U.S. average of \$8,045 (KFF, 2021).

Data on health coverage by type in Idaho is available through 2019. It is important to recognize that the data presented in Table 3 do not reflect the current picture of health coverage in Idaho. Medicaid expansion in Idaho, which was not fully implemented until after 2019, has impacted substantially the picture of health coverage in Idaho. In 2019, prior to Medicaid expansion, the average annual health insurance premium per enrolled employee in Idaho was \$6,346, of which the employee paid \$1,228 (19%). Idaho ranked 5th lowest in the U.S. (U.S. average was \$6,972). In 2019, approximately 49% of Idahoans were covered through employer-based health care plans, 8.6% individual plans, Medicaid 15.6%, Medicare 15%, and military 1.4%. The number of uninsured was 183,600, or 10.5%, of the population. See Table 3 for details.

Region	Employer	Individual	Medicaid	Medicare	Military	Uninsured	Total
Idaho	49.0%	8.6%	15.6%	15.0%	1.4%	10.5%	100%
U.S.	49.6%	5.9%	19.8%	14.2%	1.4%	9.2%	100%
ID							
Numbers	858,100	150,100	272,600	262,900	23,700	183,600	1,751,000

Table 3: 2019 health coverage by type in Idaho, the most recent data available (KFF, 2021). Medicaid expansion in Idaho has resulted in a substantial decrease in the number of uninsured Idahoans.⁸ There are 117,289 enrollees as of November 8, 2021 (IDHW, 2021).

⁶ The difference between "jobs total by occupation" and "jobs total by industry" arises from calculation methodologies. The industry measure of jobs is a broader measure of employment than occupation.

⁷ This represents a gross unadjusted spending measure, whereas GDP metrics represent net additions to Idaho's economy.

⁸ There is not a one-to-one drop in uninsured due to Medicaid expansion. The expansion causes some shifting from the other coverage categories to Medicaid.

Idaho's health care spending centers around indigent care and Idaho's portion of Medicaid spending. The total Medicaid cost in Idaho FY2019 was \$2.162 billion, of which the federal government covered 71.2% and Idaho 28.8%, or \$623.3 million. Of those covered in Idaho, 14% were elderly, 47% disabled, 13% adult, and 26% children. The 2014 average cost per Medicaid enrollee was \$5,257 for fully enrolled and partial-enrolled beneficiaries and \$5,452 for fully enrolled beneficiaries only. The highest cost per enrollee was the disabled, with \$15,381 for full and partial enrolled beneficiaries in Idaho. Approximately 29% of these costs accrue to the Idaho taxpayers (KFF, 2021; Medicaid.gov, 2021). In federal FY2018, the average per enrollee expenditure was \$7,349. The approximate cost to Idaho taxpayers per enrollee was \$2,117, 28.8% of Medicaid expenditures, with the remainder paid by the federal government (Table 4).

Location	Average Enrollee	Aged	Disabled	Adults	Children
U.S. 2014	\$5,736	\$13,063	\$16,859	\$3,278	\$2,577
Idaho (Full/Part) 2014	\$5,257	\$10,301	\$15,381	\$4,390	\$2,226
Idaho (Full) 2014	\$5,452	\$15,096	\$18,215	\$4,036	\$2,204
Idaho 2018	\$7,349	\$2,743	\$6,771	\$14,468	\$19,424
Idaho. Est. State Cost	\$2,117	\$790	\$1,950	\$4,167	\$5,594

Table 4: Expenditure per Medicaid enrollee (2014 & 2018) (KFF, 2021; Medicaid.gov). Average enrollee cost is per Medicaid recipient. Taxpayer cost represents total costs to government budgets (U.S. and Idaho, respectively) per Medicaid recipient.

In 2019, the average adjusted cost per inpatient hospital day in Idaho was \$2,511, 26th in the U.S. The national average was \$2,607. This does not include specialized service and physician costs (KFF, 2021). The annual cost of chronic disease for Medicaid beneficiaries is presented in Table 5 and ranges from \$9,127 for asthma to \$51,937 for heart failure (maximum estimate in constant 2015 U.S. dollars). Estimates are for Medicaid beneficiaries and are likely much higher for patients with private insurance or out-of-pocket patients (Chapel et al., 2017). The costs in Table 5 likely will increase with increasing extreme weather events, as health impacts of climate change are expected to affect those with pre-existing and underlying conditions disproportionately, (See the assessment's <u>Health Report</u> for more information). Heat and smoke in the western U.S. during the summer of 2021 serve as examples. Each case of COPD per year can cost between \$10,114 to \$31,753 depending on the case. COPD can be aggravated by smoke, which is projected to increase with climate change. (See the assessment's <u>Smoke Report</u> for more information.)

Disease	Minimum	Maximum
Asthma	\$5,724	\$9,127
Cancer	\$29,384	\$46,194
COPD (Lung Diseases)	\$10,114	\$31,753
Depression	\$9,048	\$11,231
Diabetes	\$17,515	\$27,888
Heart CHD	\$35,548	\$35,548
Heart HF/CHF	\$29,271	\$51,937
Hypertension	\$5,458	\$19,821
Hyperlipidemia	\$18,785	\$18,785
Schizophrenia	\$11,446	\$20,585

Table 5: Cost per patient per year for Medicaid beneficiaries (Chapel et al., 2017; Statista, n.d.).

2. Number of Hospital Beds

Idaho has a total of 45 hospitals, including private, state, and federal (Idaho Medical Association, 2021). As of November 11, 2021, Idaho had 3,289 inpatient beds, of which 2,422 beds were in use (about 73.64%). Idaho also had 302 intensive care (ICU) beds (representing 0.016% of the population), of which 254 were utilized (84.11%) (U.S. Department of Health and Human Services (HHS), 2021). Approximately 104 beds were held by COVID-19 patients. Idaho has a hospital bed for every 559 people and one ICU bed for every 6,090 people (or 1.79 beds per 1,000 population and 0.16 ICU beds per 1,000 population) (HHS, 2021). Both metrics are below the U.S. average. A natural disaster or extreme weather event may stress the Idaho health care system.

References

- Association of American Medical Colleges (AAMC). 2019. 2018 State Physician Workforce Data Report https://www.aamc.org/data-reports/workforce/data/2019-state-profiles. Accessed December 2021.
- AAMC. 2021. Report on Residents. https://www.aamc.org/data-reports/students-residents/interactivedata/table-c6-physician-retention-state-residency-training-state. Accessed December 2021.
- Becker's Hospital Review. n.d. Physican and Surgeon Average Salary for all 50 States. https://www.beckershospitalreview.com/compensation-issues/physician-and-surgeon-averagesalary-for-all-50-states.html. Accessed June 2021.
- Chapel, J. M., Ritchey, M. D., Zhang, D., Wang, G. 2017. Prevalence and Medical Costs of Chronic Diseases Among Adult Medicaid Beneficiaries. *American Journal of Preventive Medicine* 53(6).
- EMSI. 2020. Labor Market Data. https://www.economicmodeling.com/. Accessed November 2021.
- EMSI. 2021. Labor Market Data. https://www.economicmodeling.com/. Accessed July 2021.
- Idaho Board of Education. 2017. Graduate Medical Education in Idaho. https://boardofed.idaho.gov/wpcontent/uploads/2018/01/Graduate-Medical-Education-10yr-Plan.pdf. Accessed December 2021.
- Idaho College of Osteopathic Medicine (ICOM). 2021. About. https://www.idahocom.org/about/. Accessed December 2021.
- Idaho Department of Health and Welfare (IDHW). 2021. Idaho Medicaid Expansion Enrollment Report (monthly). https://healthandwelfare.idaho.gov/about-dhw/reports-and-statistics. Accessed June 2021.

- Idaho Medical Association. 2021. Idaho Hospitals. https://www.idmed.org/idaho/UploadedFiles/2021 Hospital Section FINAL.pdf. Accessed June 2021.
- Kaiser Family Foundation (KFF). 2021. Idaho Categories and Indicators. https://www.kff.org/statedata/?state=ID. Accessed July 2021.
- Medicaid.gov. Medicaid Per Capita Expenditures. https://www.medicaid.gov/stateoverviews/scorecard/how-much-states-spend-per-medicaid-enrollee/index.html. Accessed June 2021.
- Statista. Total Annual Costs Chronic Diseases Total Per Patient U.S. 2000-2016. https://www.statista.com/statistics/905242/chronic-disease-annual-costs-in-the-us-per-patient-total/. Accessed June 2021.
- University of Utah School of Medicine. 2021. Idaho Resdency Program Navigation. https://medicine.utah.edu/students/programs/md/admissions/idaho-residency/. Accessed December 2021.
- U.S. Department of Health & Human Services (HSS). 2021. Hospital Utilization. HHS Protect Public Data Hub. https://protect-public.hhs.gov/pages/ea1dc54435624e4ca1a62bde9d1b7570. Accessed November 2021.
- WWAMI. 2021. WWAMI Education Program at the University of Idaho. https://www.uidaho.edu/academics/wwami. Accessed June 2021