

Economic Impact Report

Health Care in Humboldt County, California

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Executive Summary

The health care industry is important to Humboldt County's economy. The industry captures spending by local residents and attracts retirees, some of whom are wealthy compared to the average household in the county. The health care industry also attracts visitors from neighboring counties seeking health care.

The total economic impact of health services in Humboldt County exceeds \$1.3 billion in revenue to businesses and organizations, or about 1/5 of all revenue. This translates to \$499 million in labor income and over 12,000 jobs.

The latest data from the U.S. Department of Commerce, Bureau of Economic Analysis (2004) indicate that the health care industry is responsible for over \$233 million in labor income to the county. Additionally, the CED/SBDC estimates that the industry generates more than \$472 million in revenue to businesses and organizations and provides 4,700 jobs for Humboldt County residents.

Circulation of dollars through the local economy provides an additional \$411 million in revenue to businesses and organizations. The economic impact of middle- and upper-income seniors who would have to leave the county without health care is \$252 million in revenue.

By region, health care in the Willow Creek/Hoopa Area is directly and secondarily (after circulation of dollars through the economy) responsible for \$19 million in revenue. In the Arcata/McKinleyville Area, health care is responsible for \$177 million in community revenue. The revenue impact is \$602 million in the Eureka Area, \$123 million in the Fortuna area, and \$27 million in the Southern Humboldt Healthcare District. The county impact is higher than the sum of impacts in the analyzed areas because sometimes a direct impact in one area produces a secondary impact in another area (such as a health care worker in Fortuna traveling to Eureka to go shopping – which is a direct impact in Fortuna producing a secondary impact in Eureka).

Hospitals are responsible, directly and secondarily, for \$364 million in revenue to businesses and organizations. In the analyzed areas, the revenue impact from hospitals is \$39 million in the Arcata/McKinleyville Area, \$228 million in the Eureka Area, \$35 million in the Fortuna Area, and \$6 million in the Southern Humboldt Healthcare District.

Primary care clinics, defined as members of the North Coast Clinics Network, are directly and secondarily responsible for \$76 million in Humboldt County revenue to businesses and organizations. The revenue impact is \$34 million in the Arcata/McKinleyville Area, \$28 million in the Eureka Area, and \$2 million in the Southern Humboldt Healthcare District.

Economic Impact of Health Care in Humboldt County

Del Norte and Trinity county residents receiving health care are responsible for \$35 million of the total health care impact on revenue to businesses and organizations. This adds \$17 million in labor income and 366 jobs for Humboldt County residents.

The secondary impact of health care provided in Del Norte and Trinity counties, which comes mostly from people shopping in the Arcata/Eureka area, is \$29 million in revenue to businesses and organizations, \$11 million in labor income through 342 jobs. Nearly all of this revenue comes from residents of Del Norte County because most of the population of Trinity County, as well as the hospital, are located closer to Redding which provides a wider variety of retail options than Arcata/Eureka, so most people living in the county will chose to travel there instead of Humboldt County to shop.

All of these factors make health care a vital part of the Humboldt County economy.

Methodology

This section will present the method used to determine the economic impact of health care in Humboldt County.

General Approach

The CED/SBDC Partnership uses real business revenue, income, and employment data whenever feasible to conduct economic impact analysis.

The CED/SBDC utilized data from the U.S. Department of Commerce, Bureau of Economic Analysis, Dun & Bradstreet, and IMPLAN to estimate the direct impact of health care in Humboldt County and in each of five areas of the county. The IMPLAN economic impact analysis system was utilized to calculate the secondary impact of dollars circulating through the economy as a result of the direct impact.

IMPLAN Economic Impact Analysis System

In order to conduct the economic impact analysis, a regional economic model was built for Humboldt County using the IMPLAN economic impact analysis system. IMPLAN models the economy through pre-constructed matrices measuring dollar flows between 497 private industries, nine government sectors, three other sectors covering export trade and depreciation, and households. This input-output economic model can be used to measure how changes in spending by households, industries, or governments produce changes in spending by all other households, industries, and governmental organizations. The input-output economic model predicts the flows from one industry or household to another through a matrix. A matrix is a mathematical equation that is capable of solving for all 510 variables, representing all economic sectors.

A model based on the social accounting matrix (type SAM model) was used to determine the economic impact described in this report. IMPLAN's type SAM model is the most widely used economic model to determine economic impact as of the date of this study. It is used by a majority of economic analysis consulting firms who work with local governments and economic development organizations to analyze the impact of changes to the local business structure.

Direct Impact

The direct impact is that of the businesses being analyzed. In this case, all health care establishments are considered to be the direct impact.

For the health care industry, IMPLAN provides five industry sectors. Their revenue, income, and job estimates by industry are usually reliable when compared to real data, although their latest estimates are back in 2003. However, after comparing these figures to real jobs and payroll data and more recent revenue estimates, the CED/SBDC Partnership adjusted these figures before running the economic impact through the IMPLAN model.

Table 1 – Health Care Economic Data from IMPLAN, 2003

IMPLAN Sector	Industry Description	Revenue to Businesses and Organizations	Labor Income	Other Income (rent, profit, dividends, etc.)	Government Tax Payments	Jobs
464	Home health care services	\$ 7,322,000	\$ 4,738,000	\$ 559,000	\$ 29,000	160
465	Offices of physicians, dentists, and other health professionals	\$ 172,129,000	\$ 109,901,000	\$ 22,264,000	\$ 1,033,000	2,174
466	Other ambulatory health care services	\$ 32,954,000	\$ 11,207,000	\$ 1,532,000	\$ 217,000	275
467	Hospitals	\$ 141,355,000	\$ 68,747,000	\$ 902,000	\$ 885,000	1,453
468	Nursing and residential care facilities	\$ 46,561,000	\$ 27,122,000	\$ 3,546,000	\$ 618,000	1,307
	Total for health care	\$ 400,321,000	\$ 221,715,000	\$ 28,803,000	\$ 2,782,000	5,369

Source: IMPLAN

In order to verify the direct impact estimated by IMPLAN, the CED/SBDC started with labor income and sales data for the health care industry in Humboldt County from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA). BEA data is the most reliable industry information available because it is a tabulation of business tax filings from the Internal Revenue Service.

There are two constraints with BEA data: it is only available until 2004 and industry detail is lacking. BEA combines health care with social services in their jobs data, and combines three of the five sectors available in IMPLAN into a single sector. The ambulatory health care services sector is a combination of IMPAN sectors 464-466.

Total health care labor income estimated in Table 1 (\$221.7 million) should be approximately the same as total health care labor income for 2003 in Table 2 (\$224.9 million).

Table 2 – Health Care Economic Data from US BEA, 2003

NAICS		2001	2002	2003	2004
Labor Income					
621	Ambulatory health care services	\$ 122,718,000	\$ 126,975,000	\$ 127,340,000	\$ 130,456,000
622	Hospitals	\$ 69,789,000	\$ 72,170,000	\$ 70,659,000	\$ 80,029,000
623	Nursing and residential care facilities	\$ 22,905,000	\$ 26,140,000	\$ 26,852,000	\$ 23,089,000
	Total for health care	\$ 215,412,000	\$ 225,285,000	\$ 224,851,000	\$ 233,574,000
Jobs					
62	Health care and social assistance	7,584	7,406	7,464	7,085

Source: U.S. Department of Commerce, Bureau of Economic Analysis

The CED/SBDC used average industry growth from 2001 to 2004 and change in the consumer price index (CPI) for health care to estimate direct revenue and jobs by health care industry in 2005. The jobs estimate was further refined to reflect a better estimate of “annual average” jobs. BEA’s jobs figures include all people who have worked for all businesses over the course of a year. As such, a person who changes jobs twice over the course of a year would be counted three times. The CED/SBDC used jobs data from Dun & Bradstreet to make this adjustment.

Table 3 – Direct Impact of Health Care in Humboldt County, 2005

IMPLAN Sector	Revenue	Jobs
Home health care services	\$ 9,122,588	190
Offices of physicians, dentists, and other health professionals	\$ 214,458,071	1,812
Other ambulatory health care services	\$ 41,057,877	561
Hospitals	\$ 189,729,442	1,866
Nursing and residential care facilities	\$ 18,255,633	271
Total for health care	\$ 472,623,611	4,700

Source: IMPLAN; U.S. Department of Commerce, Bureau of Economic Analysis; and the CED/SBDC Partnership

Secondary Impact

The secondary impact is the revenue, labor income, and jobs generated by all other businesses and organizations in Humboldt County as a result of dollars covered in the direct impact circulating in the local economy. IMPLAN was used to calculate the secondary impact for the county and for each subregion.

Secondary Impact of Lost Senior Spending

According to the most recent study on the topic, 60 percent of middle- and upper-income seniors over 60 years of age require medical care be present in the community in which

they locate. This should not be surprising because seniors require medical care more often than any other age cohort with the possible exception of children. Therefore, loss of a substantial portion of the middle- and upper-income senior population, and their spending, can be included in the economic impact of all health care.

Loss of senior spending is not included in the economic impact of hospitals and primary care clinics because other health care options will be available and there is no reliable information on the effect a partial loss of health care would have on the middle- and upper-income senior population, although some impact should be expected.

Total Impact

The total impact is the sum of the direct impact, secondary impact, and the impact of lost senior households due to lack of local medical care.

Multiplier

The multiplier is the ratio between total impact and direct impact. It is the amount of revenue, value-added, and jobs generated in the county for every \$1.00 in revenue or value-added, or every one job. This figure is not included in the economic impact of all health care because the total impact includes the secondary impact of lost senior spending, which is not addressed in the direct impact. The multiplier is an invalid calculation in this situation.

The economic impact can be presented in many different ways. In this report, the CED/SBDC presents the impact in terms of revenue to businesses and organizations, labor income, and full- and part-time jobs.

Business & Organization Revenue

This is the total dollar revenue to all business, governmental, and nonprofit organizations from all sources. IMPLAN refers to business and organization revenue as “Output.”

Labor Income

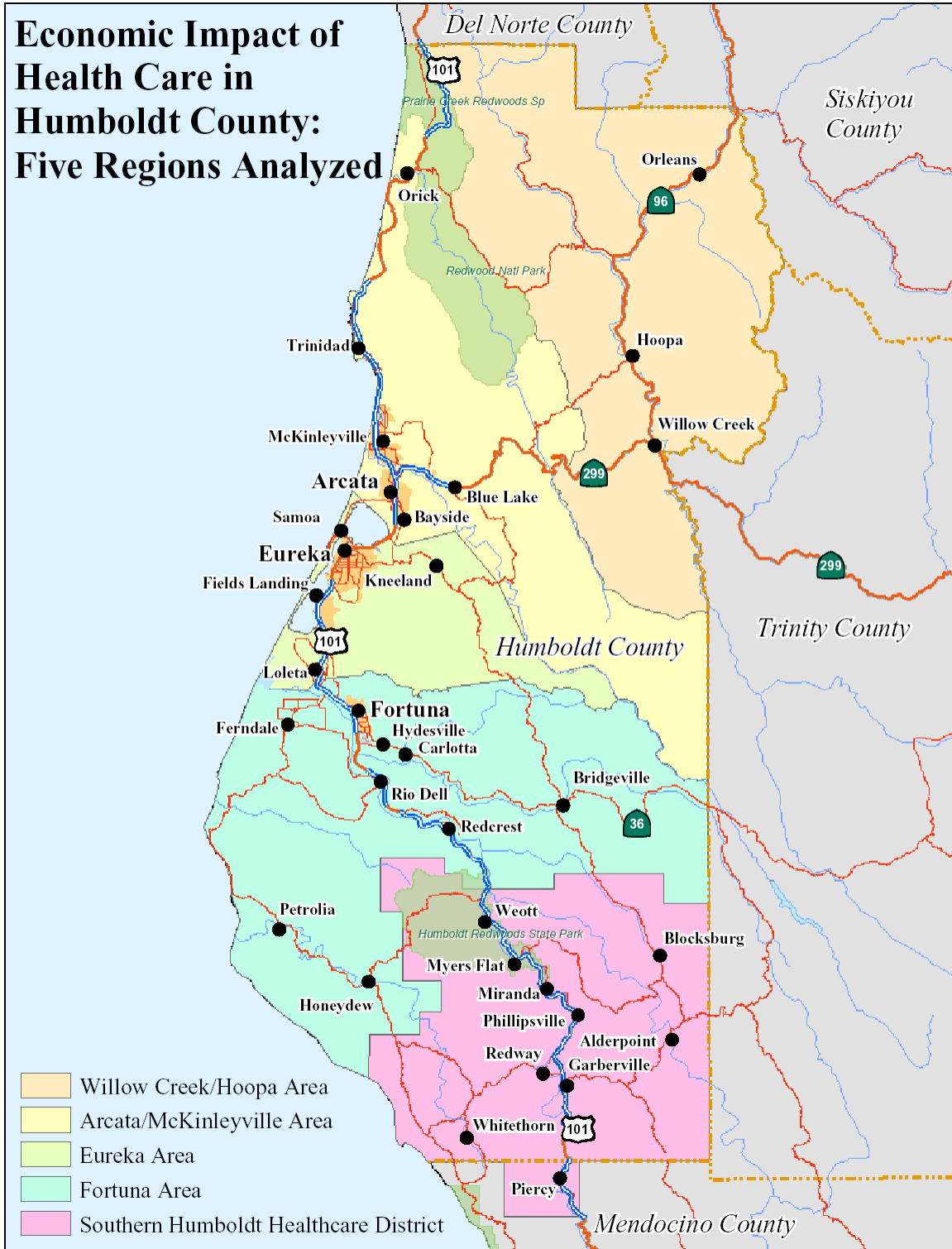
Labor income is the portion of business and organization revenue paid out as income to workers and business proprietors. This represents nearly all financial benefit to local residents. Other financial benefits may include income from rental of property or equipment, dividends paid on investment in local businesses, and payments from government using secondary revenue. These other sources of income cannot reliably be computed for local residents using the economic model, so they are excluded to keep the economic impact estimate conservative.

Full- and Part-time Jobs

This is the number of jobs provided by businesses because of additional revenue generated. It includes full-time, part-time and seasonal jobs.

Five Areas Analyzed

The CED/SBDC analyzed the economic impact of health care in five Humboldt County regions. These regions are shown in the following map.



Willow Creek/Hoopa Area

The Willow Creek/Hoopa Area is the most remote area of Humboldt County. It is the only region with no hospital, the nearest of which is in Arcata, 42 miles from Willow Creek, 54 miles from Hoopa, and 82 miles from Orleans, mostly along winding mountain roadways. Although not shown on this map, much of the area is located in the Hoopa Valley and Yurok Indian Reservations. It is the least populous analyzed area with just over 5,000 people, although it is the largest in area.

Arcata/McKinleyville Area

The Arcata/McKinleyville Area is roughly defined as the service area for Mad River Hospital in Arcata. The area continues north along U.S. Highway 101 through Trinidad and Orick to Redwood National Park and east along State Highway 299 through Blue Lake. It is the second most populous analyzed area with nearly 44,000 people.

Eureka Area

The Eureka Area is defined as the service area for St. Joseph's Hospital in Eureka. It includes all but the northernmost shores of Humboldt Bay, south along U.S. Highway 101 through Loleta, and inland through Kneeland. With over 50,000 people, this is the most populous analyzed area in Humboldt County, despite being the smallest in area.

Fortuna Area

The Fortuna Area is roughly defined as the service area for Redwood Memorial Hospital in Fortuna. It extends south along U.S. Highway 101 to Humboldt Redwoods State Park, south along the lost coast through Honeydew, and east along State Highway 36 to the Trinity County line. It has half the population of the Eureka area with over 25,000 people.

Southern Humboldt Healthcare District

The Southern Humboldt Healthcare District (SHHD) is a property tax district supporting Jerold Phelps Hospital in Garberville. The district includes the portion of Humboldt County south of Humboldt Redwoods State Park and extends into Mendocino County along U.S. Highway 101 through Piercy. More than 7,000 people live in the district.

Population Growth

Population growth has been fairly steady countywide since 1990, although both the Willow Creek/Hoopa Area and the SHHD experienced declines since 2000. The large population increase in the SHHD between 1990 and 2000 was due to the development of the Shelter Cove area west of Whitethorn.

Table 4 – Population Growth

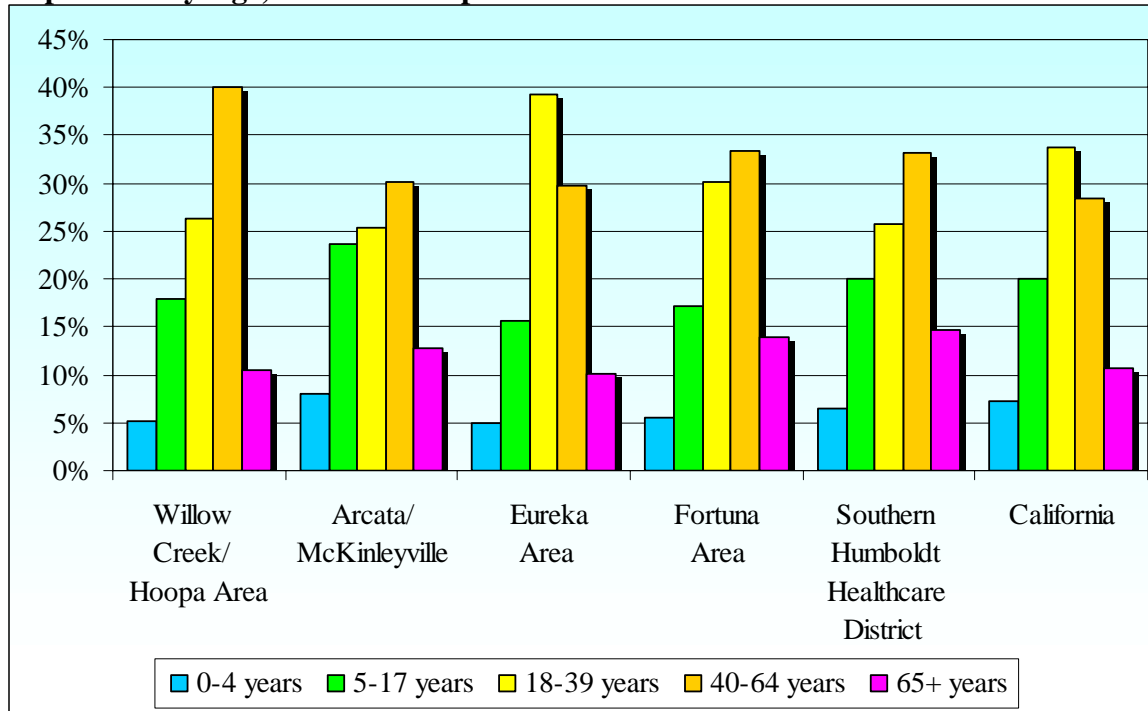
Region	1990	2000	2005
Willow Creek/ Hoopa Area	4,821	5,311	5,305
Arcata/McKinleyville Area	37,995	41,998	43,844
Eureka Area	47,730	48,969	50,989
Fortuna Area	21,867	23,300	25,157
Southern Humboldt Healthcare District	4,022	7,458	7,138
Humboldt County	116,435	127,036	132,434

Source: US Census Bureau, 2000 & ESRI Business Analyst, California Department of Finance, and CED/SBDC Partnership

Population by Age

Each analyzed area has a unique age distribution. Arcata/McKinleyville has the highest proportion of children under 17, making up 32 percent of the population. Eureka has the most young working-age adults age 18 to 39. Willow Creek/Hoopa has the highest proportion of older working-age adults age 40 to 64 and the SHHD has the highest proportion of retired persons age 65 and over. All regions have higher proportions of the older working-age cohort (age 40 to 64) than California as a whole.

Population by Age, Percent of Population



Source: US Census Bureau, 2000

Income

The Arcata/McKinleyville, Eureka, and Fortuna areas each had a median household income of over \$31,000 in 2000, the latest year for which household income is reliably

measured at the local level. The Southern Humboldt Hospital District was behind slightly with a median income of \$29,000 while the Willow Creek/Hoopa Area had a much lower median income of less than \$24,000.

When discussing the economic impact of health care, it is important to note populations that require health care, such as seniors over 65 years of age. Middle- and upper-income seniors would have the mobility available to move if the health care they required were no longer present. The median income of senior households earning more than \$30,000 per year presents a striking picture, particularly of the Southern Humboldt Hospital District. The district has been able to attract a disproportionate share of wealthy retirees, the median income of which was over \$66,000 in 2000. Even the Willow Creek/Hoopa Area, with its lower average incomes, attracts a higher share of wealthy retirees than Arcata/McKinleyville or Fortuna.

Table 5 – Median Household Income

Region	Median Household Income	Median for Seniors Earning \$30,000+ per Year
Willow Creek/ Hoopa Area	\$ 23,675	\$ 59,386
Arcata/McKinleyville	\$ 31,651	\$ 57,393
Eureka Area	\$ 31,086	\$ 59,892
Fortuna Area	\$ 32,669	\$ 56,875
Southern Humboldt Healthcare District	\$ 29,082	\$ 66,141

Source: US Census Bureau, 2000

Jobs by Industry

In Eureka and Arcata/McKinleyville, the health care and social assistance industry sector was the largest employer. Countywide, health care and social assistance is responsible for almost 19 percent of all wage and salary jobs. Retail trade was the largest employer in Willow Creek/Hoopa, Fortuna, and the SHHD. Along with health care and social assistance and retail trade, construction and accommodation and food services are among the top five industries in all five analyzed areas.

Each analyzed region has unique industrial strengths, measured by their location quotients. In Willow Creek/Hoopa, they are construction and educational services. In Arcata/McKinleyville, they are agriculture and arts and entertainment (Humboldt State University is not included in the table because it not a private sector employer). Eureka's unique strengths are in utilities, finance and insurance, and information. In Fortuna, the unique industries are manufacturing, agriculture, and transportation. Information, accommodation and food services, and retail trade are the SHHD's unique industries.

Table 6 – Private Sector Jobs by Industry

Industry	Willow Creek/ Hoopa Area	Arcata/ McKinleyville	Eureka Area	Fortuna Area	Southern Humboldt Healthcare District
Agriculture, forestry, fishing, and hunting	12	404	92	139	20
Utilities	0	2	328	0	6
Construction	64	776	974	239	78
Manufacturing	5	1,662	753	769	34
Wholesale trade	0	517	616	56	44
Retail trade	109	1,742	3,769	809	430
Transportation and warehousing	17	402	361	187	31
Information	11	57	446	25	62
Finance and insurance	10	163	1,010	80	34
Real estate and rental and leasing	4	179	387	52	15
Professional, scientific, and tech. services	16	776	751	126	40
Mgmt. of companies and enterprises	0	41	83	15	0
Admin, support, waste mgmt., and remediation	19	232	643	57	10
Educational services	7	61	92	14	6
<i>Health care and social assistance</i>	88	1,809	3,914	477	250
Arts, entertainment, and recreation	18	618	302	53	12
Accommodation and food services	62	1,697	2,112	490	318
Other services (except public admin.)	22	457	928	129	53
Unclassified establishments	4	10	11	9	2
Total	470	11,607	17,571	3,725	1,446

Source: U.S. Department of Commerce, County Business Patterns and CED/SBDC Partnership

Direct Health Care Impact by Analyzed Area

In order to distribute the direct impact among the areas analyzed, the CED/SBDC collected a list of health care businesses from Dun & Bradstreet, which is an organization that checks loan credit for businesses and sells the business information it collects. Sales by industry from Dun & Bradstreet were used to calculate the distribution of county health care sales among the five regions of analysis.

The CED/SBDC further refined the regional estimates by distributing the Dun & Bradstreet business list to local representatives familiar with the health care industry in Humboldt County. The representatives included Dr. Ann Lindsey, Public Health Officer for Humboldt County Public Health, Penny Figas from the Humboldt-Del Norte County Medical Society, and Martin Love from the Humboldt-Del Norte Independent Practice Association. From their input, the CED/SBDC decided to interview the four major hospitals in Humboldt County to acquire their actual revenue and employment numbers

Economic Impact of Health Care in Humboldt County

and added several senior care homes that were classified under social services in Dun & Bradstreet.

Table 7 – Direct Revenue Impact of Health Care in Humboldt County, 2005

IMPLAN Sector	Willow Creek/Hoopa Area	Arcata/McKinleyville Area	Eureka Area	Fortuna Area	Southern Humboldt Healthcare District	County Total
Home health care services	\$ 0	\$ 1,733,470	\$ 6,096,060	848,199	\$ 444,860	\$ 9,122,588
Offices of physicians, dentists, and other health professionals	\$ 5,305,224	\$ 23,266,682	\$ 141,461,053	38,404,860	\$ 6,020,252	\$ 214,458,071
Other ambulatory health care services	\$ 6,743,553	\$ 10,180,072	\$ 23,039,722	970,034	\$ 124,496	\$ 41,057,877
Hospitals	\$ 0	\$ 24,400,000	\$ 134,048,261	26,006,000	\$ 5,275,181	\$ 189,729,442
Nursing and residential care facilities	\$ 0	\$ 2,749,394	\$ 14,814,097	251,165	\$ 440,977	\$ 18,255,633
Total for health care	\$ 12,048,777	\$ 62,329,618	\$ 319,459,192	\$ 66,480,258	\$ 12,305,766	\$ 472,623,611

Source: IMPLAN; U.S. Department of Commerce, Bureau of Economic Analysis; and the CED/SBDC Partnership

Table 8 – Direct Jobs Impact of Health Care in Humboldt County, 2005

IMPLAN Sector	Willow Creek/Hoopa Area	Arcata/McKinleyville Area	Eureka Area	Fortuna Area	Southern Humboldt Healthcare District	County Total
Home health care services	0	35	135	15	5	190
Offices of physicians, dentists, and other health professionals	33	519	961	254	45	1,812
Other ambulatory health care services	80	86	370	23	2	561
Hospitals	0	500	1,083	211	72	1,866
Nursing and residential care facilities	0	56	201	5	9	271
Total for health care	113	1,196	2,750	508	133	4,700

Source: IMPLAN; U.S. Department of Commerce, Bureau of Economic Analysis; and the CED/SBDC Partnership

Economic Impact of All Health Care

In this section, the economic impact of all health services in Humboldt County is analyzed.

The direct impact is the impact of all health care in the analyzed area. The secondary impact is the result of direct impact dollars circulating through the area's economy. The secondary impact of lost senior spending represents 60 percent of middle- and upper-income seniors who would likely leave the area if there was no health care available. These figures are explained in the methodology section.

The secondary impact of all health care in Humboldt County is greater than the sum of impacts in the analyzed areas. It is typical for larger geographic areas to have higher secondary impacts because more of the secondary impact is captured in larger areas. For example, if a hospital worker in Fortuna drives to Eureka to shop at Target, the secondary impact from that spending is not included in Fortuna because the money was not spent there, but is included in the county's secondary impact because the spending remained in Humboldt County. Therefore, there are secondary impacts included in the county table that are not included in the region tables.

The total impact of health care in Humboldt County is over \$1.1 billion in revenue to businesses and organizations, nearly \$500 million in labor income, and over 12,000 jobs. This represents about 20 percent of Humboldt County's economy. The impact of health care in the county is so large because the county attracts many higher income retirees from other parts of California and the relative lack of export-oriented industries in the county.

Table 9 – Economic Impact of All Health Care in Humboldt County

	Direct Impact	Secondary Impact	Secondary Impact of Lost Senior Spending¹	Total Impact
Revenue to businesses and organizations	\$ 472,623,611	\$ 410,853,058	\$ 251,628,092	\$ 1,135,104,761
Labor income	\$ 259,443,742	\$ 158,031,478	\$ 81,877,500	\$ 499,352,720
Full- and part-time jobs	4,700	4,662	2,953	12,315

¹Impact of 4,509 middle- and high-income senior households earning an average of \$59,386 per year.

Source: IMPLAN and CED/SBDC Partnership

In the Willow Creek/Hoopa Area, the total impact of all health care is nearly \$19 million in revenue to businesses and organizations, nearly \$8 million in labor income, and nearly 200 jobs.

Table 10 – Economic Impact of All Health Care in the Willow Creek-Hoopa Area

	Direct Impact	Secondary Impact	Secondary Impact of Lost Senior Spending¹	Total Impact
Revenue to businesses and organizations	\$ 12,048,777	\$ 1,611,486	\$ 5,330,522	\$ 18,990,785
Labor income	\$ 5,651,509	\$ 622,799	\$ 1,426,004	\$ 7,700,312
Full- and part-time jobs	113	18	58	189

¹Impact of 168 middle- and high-income senior households earning an average of \$57,393 per year.

Source: IMPLAN and CED/SBDC Partnership

In the Arcata/McKinleyville Area, the total impact of all health care is nearly \$177 million in revenue to businesses and organizations, over \$66 million in labor income, and nearly 2,350 jobs.

Table 11 – Economic Impact of All Health Care in the Arcata/McKinleyville Area

	Direct Impact	Secondary Impact	Secondary Impact of Lost Senior Spending¹	Total Impact
Revenue to businesses and organizations	\$ 62,329,618	\$ 35,602,553	\$ 79,031,967	\$ 176,964,138
Labor income	\$ 32,856,841	\$ 13,664,888	\$ 19,963,881	\$ 66,485,610
Full- and part-time jobs	1,196	404	745	2,345

¹Impact of 1,394 middle- and high-income senior households earning an average of \$59,118 per year.

Source: IMPLAN and CED/SBDC Partnership

In the Eureka Area, the total impact of all health care is greater than any other analyzed area at over \$602 million in revenue to businesses and organizations, nearly \$285 million in labor income, and over 6,150 jobs.

Table 12 – Economic Impact of All Health Care in the Eureka Area

	Direct Impact	Secondary Impact	Secondary Impact of Lost Senior Spending¹	Total Impact
Revenue to businesses and organizations	\$ 319,459,192	\$ 214,128,768	\$ 68,710,924	\$ 602,298,884
Labor income	\$ 175,782,750	\$ 82,316,850	\$ 26,463,653	\$ 284,563,252
Full- and part-time jobs	2,750	2,429	976	6,155

¹Impact of 1,683 middle- and high-income senior households earning an average of \$59,892 per year.

Source: IMPLAN and CED/SBDC Partnership

In the Fortuna Area, the total impact of all health care is over \$123 million in revenue to businesses and organizations, nearly \$57 million in labor income, and over 1,150 jobs.

Table 13 – Economic Impact of All Health Care in the Fortuna Area

	Direct Impact	Secondary Impact	Secondary Impact of Lost Senior Spending¹	Total Impact
Revenue to businesses and organizations	\$ 66,480,258	\$ 22,104,265	\$ 34,855,406	\$ 123,439,929
Labor income	\$ 38,180,890	\$ 8,533,973	\$ 10,082,544	\$ 56,797,407
Full- and part-time jobs	508	250	394	1,152

¹Impact of 937 middle- and high-income senior households earning an average of \$56,875 per year.

Source: IMPLAN and CED/SBDC Partnership

In the SHHD, the total impact of all health care is over \$27 million in revenue to businesses and organizations, over \$11 million in labor income, and nearly 300 jobs. The SHHD is the only analyzed area where jobs lost due to the secondary impact of lost senior spending is greater than direct health care jobs lost.

Table 14 – Economic Impact of All Health Care in the Southern Humboldt Healthcare District

	Direct Impact	Secondary Impact	Secondary Impact of Lost Senior Spending¹	Total Impact
Revenue to businesses and organizations	\$ 12,305,766	\$ 2,323,242	\$ 12,508,568	\$ 27,137,576
Labor income	\$ 6,995,666	\$ 894,192	\$ 3,423,795	\$ 11,313,653
Full- and part-time jobs	133	26	138	297

¹Impact of 237 middle- and high-income senior households earning an average of \$66,141 per year.

Source: IMPLAN and CED/SBDC Partnership

Economic Impact of Hospitals

In this section, the economic impact of general medical and surgical hospitals in Humboldt County is analyzed. In this analysis, it is assumed that loss of the hospital produces no subsequent loss of other health services. If the hospitals were to close, it should be expected that some additional health care businesses associated with the hospital would also close, but that other organizations like community clinics would expand to fill the void in health services. The net effect is likely to be close to the direct and secondary effects of the hospitals only.

The multiplier is included in the hospital impact tables because no ancillary impacts, such as the loss of senior spending, is included here. The multiplier is the ratio between the total and direct impacts.

As with all health care, the secondary impact of hospitals in Humboldt County is greater than the sum of impacts in the analyzed areas. There are secondary impacts included in the county table, but not included in the analyzed area tables, where a secondary impact in an analyzed area occurred due to a direct impact in a different analyzed area.

The total impact of hospitals in Humboldt County is nearly \$364 million in revenue to businesses and organizations, over \$160 million in labor income, and over 4,000 jobs.

Table 15 – Economic Impact of Hospitals in Humboldt County

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 189,729,440	\$ 174,119,516	\$ 363,848,956	1.92
Labor income	\$ 92,273,304	\$ 67,870,477	\$ 160,143,781	1.74
Full- and part-time jobs	1,866	2,189	4,055	2.17

Source: IMPLAN and CED/SBDC Partnership

There are no hospitals present in the Willow Creek/Hoopa Area.

In the Arcata/McKinleyville Area, the total impact of Mad River Hospital is over \$39 million in revenue to businesses and organizations, over \$17.5 million in labor income, and nearly 670 jobs.

Table 16 – Economic Impact of Mad River Hospital in the Arcata/McKinleyville Area

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 24,400,000	\$ 14,731,025	\$ 39,131,025	1.60
Labor income	\$ 11,866,733	\$ 5,723,431	\$ 17,590,164	1.48
Full- and part-time jobs	500	166	666	1.33

Source: IMPLAN and CED/SBDC Partnership

In the Eureka Area, the total impact of hospitals is greater than any other analyzed area. The impact of St. Joseph’s Hospital is over \$228 million in revenue to businesses and organizations, nearly \$102 million in labor income, and nearly 2,150 jobs. Psychiatric and rehabilitation hospitals are also present in the Eureka Area and included in the economic impact of all health care, but are not included in this section.

Table 17 – Economic Impact of Hospitals in the Eureka Area

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 131,622,000	\$ 92,415,164	\$ 224,037,164	1.70
Labor income	\$ 64,013,245	\$ 35,906,011	\$ 99,919,255	1.56
Full- and part-time jobs	850	1,047	1,897	2.23

Source: IMPLAN and CED/SBDC Partnership

In the Fortuna Area, the total impact of Redwood Memorial Hospital is over \$35 million in revenue to businesses and organizations, over \$16 million in labor income, and over 300 jobs.

Table 18 – Economic Impact of Redwood Memorial Hospital in the Fortuna Area

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 26,006,000	\$ 9,008,838	\$ 35,014,838	1.35
Labor income	\$ 12,647,797	\$ 3,500,197	\$ 16,147,994	1.28
Full- and part-time jobs	211	102	313	1.48

Source: IMPLAN and CED/SBDC Partnership

In the SHHD, the total impact of Jerold Phelps Hospital is over \$6 million in revenue to businesses and organizations, nearly \$3 million in labor income, and over 80 jobs.

Table 19 – Economic Impact of Jerold Phelps Hospital in the Southern Humboldt Healthcare District

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 5,275,181	\$ 1,037,082	\$ 6,312,263	1.20
Labor income	\$ 2,565,540	\$ 403,155	\$ 2,968,694	1.16
Full- and part-time jobs	72	11	83	1.16

Source: IMPLAN and CED/SBDC Partnership

Economic Impact of Primary Care Clinics

In this section, the economic impact of nonprofit primary care clinics in Humboldt County is analyzed. There may be some disagreement as to what constitutes a primary care clinic, so for the purpose of this analysis, a nonprofit primary care clinic includes members of the North Coast Clinics Network located in Humboldt County. These clinics include:

Arcata/McKinleyville Area

- Orick Community Health Center
- McKinleyville Community Health Center
- North Country Clinic
- Humboldt Open Door Clinic

Eureka Area

- Mobile Medical Office
- Humboldt County Public Health Branch
- Six Rivers Planned Parenthood
- Eureka Community Health Center
- Burre Dental Center
- Telehealth & Visiting Specialist Center
- Old Town Dental

Southern Humboldt Hospital District

- Redwoods Rural Health Center

Satellite locations for each of these clinics are also included.

As with hospitals, the multiplier is included for primary care clinics because no ancillary impacts, such as the loss of senior spending, are included here. The multiplier is the ratio between the total and direct impacts.

As with all health care and hospitals only, the secondary impact of primary care clinics in Humboldt County is greater than the sum of impacts in the analyzed areas. There are secondary impacts included in the county table, but not included in the analyzed area tables, where a secondary impact in an analyzed area occurred due to a direct impact in a different analyzed area.

The total impact of primary care clinics in Humboldt County is nearly \$76 million in revenue to businesses and organizations, nearly \$34 million in labor income, and almost 900 jobs.

Table 20 – Economic Impact of Primary Care Clinics in Humboldt County

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 38,886,120	\$ 36,820,704	\$ 75,706,824	1.95
Labor income	\$ 18,738,069	\$ 14,768,680	\$ 33,506,749	1.79
Full- and part-time jobs	404	465	869	2.15

Source: IMPLAN and CED/SBDC Partnership

There are no primary care clinics present in the Willow Creek/Hoopa Area.

In the Arcata/McKinleyville Area, the total impact of primary care clinics is greater than any other analyzed area at over \$34 million in revenue to businesses and organizations, over \$17.5 million in labor income, and nearly 670 jobs.

Table 21 – Economic Impact of Primary Care Clinics in the Arcata/McKinleyville Area

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 21,083,620	\$ 13,354,448	\$ 34,438,068	1.63
Labor income	\$ 10,835,736	\$ 5,379,116	\$ 16,214,852	1.50
Full- and part-time jobs	229	169	397	1.74

Source: IMPLAN and CED/SBDC Partnership

In the Eureka Area, the total impact of primary care clinics is nearly \$28 million in revenue to businesses and organizations, over \$11 million in labor income, and nearly 300 jobs.

Table 22 – Economic Impact of Primary Care Clinics in the Eureka Area

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 16,102,499	\$ 11,520,403	\$ 27,622,902	1.72
Labor income	\$ 6,816,913	\$ 4,584,034	\$ 11,400,947	1.67
Full- and part-time jobs	154	144	297	1.94

Source: IMPLAN and CED/SBDC Partnership

There are no primary care clinics present in the in the Fortuna Area.

In the SHHD, the total impact of primary care clinics is over \$2 million in revenue to businesses and organizations, more than \$1 million in labor income, and nearly 30 jobs.

Table 23 – Economic Impact of Primary Care Clinics in the Southern Humboldt Healthcare District

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 1,700,000	\$ 364,509	\$ 2,064,509	1.21
Labor income	\$ 1,085,420	\$ 149,109	\$ 1,234,529	1.14
Full- and part-time jobs	22	4	26	1.20

Source: IMPLAN and CED/SBDC Partnership

Economic Impact Health Care in Humboldt County Provided to Residents of Del Norte and Trinity Counties

This section breaks out the portion of the economic impact of health care in Humboldt County supplied by patients from Del Norte and Trinity counties. This is a portion of the total impact on health care.

There is no reliable data on how much of all types of health care provided in Humboldt County is provided to residents of Del Norte or Trinity counties, although there is a data set that provides a good indication. That set is the hospital patient discharge data from the California Department of Health Services, Office of Statewide Planning and Development (OSHPD) which provides data on all hospital discharges in California, including the patient's residential zip code and the amount charged for services. While the amount charged from the OSHPD database does not reflect actual income, the percent of total charges that are for care to patients from Del Norte and Trinity counties serve as a proxy for the percent of health care provided to those residents.

Tables 24 and 25 show patient and discharge data for Humboldt County hospital patients living in Del Norte and Trinity counties. Less than 2 percent of St. Joseph's and Mad River's patients come from these counties, as do less than 1 percent of Redwood Memorial's and none of Jerold Phelps' patients.

Table 24 – Residents of Del Norte and Trinity County Discharged from Humboldt County Hospitals, 2004

Hospital	Discharges from Trinity or Del Norte Counties	Total Number of Discharges	Percent of Discharges
Mad River (Arcata)	87	5,946	1.5%
St. Joseph's (Eureka)	275	14,150	1.9%
Redwood Memorial (Fortuna)	14	2,116	0.7%

Source: California Department of Health Services, Office of Statewide Planning and Development

Over 5 percent of the amount charged for services at St. Joseph's Hospital are for services to Del Norte or Trinity County patients. Over 3 percent of Mad River's and less than 1 percent of Redwood Memorial's chargers are for services to patients from Del Norte or Trinity counties. It is reasonable that the percent of amount charged would be higher than the percent of patients because medical care for which a patient must travel long distances usually requires a medical specialty not available in their own community, and specialized medicine typically costs more to provide than more general medicine.

Table 25 – Amount Charged for Residents of Del Norte and Trinity County Discharged from Humboldt County Hospitals, 2004

Hospital	Amount Charged	Total Hospital Charges	Percent of Charges
Mad River (Arcata/McKinleyville Area)	\$ 1,140,179	\$ 35,085,912	3.2%
St. Joseph’s (Eureka Area)	\$ 11,723,437	\$ 228,855,424	5.1%
Redwood Memorial (Fortuna Area)	\$ 296,000	\$ 39,452,645	0.8%

Source: California Department of Health Services, Office of Statewide Planning and Development

Applying these percentages to all health care in the Arcata/McKinleyville, Eureka, and Fortuna areas produces an estimate of the economic impact of all health care provided in Humboldt County to residents of Del Norte and Trinity counties. These patients are responsible for over \$35 million in revenue to businesses and organizations, nearly \$17 million in labor income, and over 360 jobs in Humboldt County.

Table 26 – Economic Impact of Humboldt County Health Care Provided for Residents of Del Norte and Trinity Counties

	Direct Impact	Secondary Impact	Total Impact	Multiplier
Revenue to businesses and organizations	\$ 18,889,032	\$ 16,420,289	\$ 35,309,321	1.87
Labor income	\$ 10,358,915	\$ 6,309,787	\$ 16,668,702	1.61
Full- and part-time jobs	184	182	366	1.99

Source: IMPLAN and CED/SBDC Partnership

This impact does not include other spending by patients and their friends and family coming to Humboldt County to receive medical care. Without an independent survey, that impact cannot be determined.

Secondary Impact of Health Care Provided in Del Norte and Trinity Counties

As a market center for California’s North Coast, The Eureka/Arcata urbanized area in Humboldt County attracts secondary spending from direct impacts in neighboring counties. In this section, the CED/SBDC presents an analysis of the secondary impact to Humboldt County of health care provided in Del Norte and Trinity counties. This impact is not included as part of any impact analyzed previously in this report.

In Del Norte County, people have a choice of driving to Eureka/Arcata or Grants Pass. Both Eureka/Arcata and Grants Pass are a roughly equal drive time from Crescent City, which is the major population center in Del Norte County. The retail base in Eureka/Arcata is larger than in Grants Pass, although since Grants Pass is in Oregon, people who shop there are not charged a sales tax. It is not known which retail center, Eureka/Arcata or Grants Pass, attracts more spending from Del Norte County residents. For the purpose of this analysis, it is assumed that most people go to Eureka/Arcata because it has the larger retail base.

In Trinity County people have a choice of driving to Eureka/Arcata to the west or Redding to the east. Redding has a larger retail base than Eureka/Arcata, meaning that people for which travel to either place means an equal driving time, most people would choose Redding. More than three out of four people living in Trinity County live closer to Redding than to Eureka/Arcata, and therefore, most people in Trinity County would choose to drive to Redding to shop. Because of this, an analysis of secondary spending in Humboldt County of health care provided in Trinity County would not be reliable. Therefore, the economic impact of health care provided in Del Norte and Trinity counties is limited to that provided in Del Norte County in this analysis.

The total impact to Humboldt County of health care provided in Del Norte County is over \$29 million in revenue to businesses and organizations, more than \$11 million in labor income, and almost 342 jobs.

Table 27 – Economic Impact to Humboldt County of Health Care Provided in Del Norte County

	Secondary Impact
Revenue to businesses and organizations	\$ 29,440,524
Labor income	\$ 11,358,929
Full- and part-time jobs	342

Source: IMPLAN and CED/SBDC Partnership

Conclusion

Health care is directly and secondarily responsible for nearly 20 percent of the economy of Humboldt County. The industry is responsible for attracting some wealthy retirees to the county, which is responsible for a significant portion of the economic impact. Local communities must be able to preserve quality health services to continue to thrive.

Humboldt County has fared better economically than most rural Northern California counties in the past twenty years. Though it, too, has struggled from the loss of traditional basic industries such as wood product manufacturing, the area has done well to attract wealthy early- and near-retirees seeking an active rural lifestyle, even before most of Northern California experienced their influx of these migrants from the city in the early part of this decade. A strong health care industry has kept this demographic in the county longer than they remain in most Northern California counties and this contributes significantly to the county's economic performance. Although it is unknown if the county could continue to do as well as it has without health care due to the nature of the county's economic growth in the past twenty years, sustaining Humboldt County's current economic growth is unlikely without the presence of a significant health care system.