

The Economic Contributions of North Carolina's Health Systems and Hospitals

December 2022



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A Note from the North Carolina Healthcare Association



On behalf of the North Carolina Healthcare Association (NCHA), welcome to our 2022 Economic Impact Analysis report. This represents an update to a study we last published in 2017 and tracks the economic impact of health systems and hospitals in North Carolina.

Healthcare systems and hospitals are cornerstones of health and healing in North Carolina communities large and small, urban and rural. They provide care to people in times of need, are among the top employers in many counties, and contribute to economic development and growth in important ways. By quantifying this economic impact, while also focusing on important stories of how people are making a difference in their communities, we can better understand the role of healthcare systems and hospitals as a whole.

NCHA works with our members and partners to continually advance a vision for North Carolina in which high-quality healthcare is equitable and accessible for all. After taking a leading role in responding to and guiding patients and communities through the COVID-19 pandemic, North Carolina healthcare systems and hospitals continue to adapt to a changing environment that includes challenges such as persistent inflation and workforce shortages, while remaining firm in their mission to advance the health and well-being of all North Carolinians.

Thank you,

A handwritten signature in black ink, appearing to read 'S. J. Lawler', written in a cursive style.

Stephen J. Lawler

President and CEO

North Carolina Healthcare Association

Introduction

Although hospitals' role in health care is well known, the economic impacts that health systems and hospitals have on their communities are less understood. Beyond the health services offered, health systems and hospitals are economic engines that sustain and nurture their communities by employing a wide range of workers and purchasing local goods and services. NCHA has commissioned this study to estimate the economic impacts and social contributions of health systems and hospitals in North Carolina to increase public awareness as decisions about public health policies are considered.

The current study, *The Economic Contributions of North Carolina's Health Systems and Hospitals*, presents information for 137 hospital facilities in North Carolina containing more than 23,000 patient beds.¹ Health systems in North Carolina range from large university hospital systems to smaller hospitals that primarily serve their local communities. Hospitals may provide acute care, rehabilitation, behavioral, psychiatric, and veterans' services. Health systems also operate skilled nursing facilities, home healthcare programs, primary care, urgent care, and freestanding emergency care. Hospitals may be operated as public, nonprofit organizations or as private companies.

Most health systems and hospitals in North Carolina are members of the North Carolina Healthcare Association (NCHA). NCHA is an advocacy organization that provides members with leadership, information, and education services with the goal of improving the "delivery of quality and affordable health care in North Carolina" (NCHA, 2021). Since 1918, NCHA has served as a resource for health systems, hospitals, and other stakeholders by delivering accurate and timely information and insight about leading public health policies and as an advocate of member issues to community leaders and the state's congressional delegation (NCHA, 2021).

NCHA promotes a future North Carolina in which high-quality health care is equitable and accessible for all.



Health care is one of the largest industries in the United States. In 2020, U.S. healthcare spending totaled \$4.1 trillion, or \$12,530 per person (Centers for Medicare & Medicaid Services [CMS], 2021). The recent COVID-19 pandemic has strained healthcare systems and hospitals by increasing the numbers of people in intensive care units (North Carolina Department of Health and Human Services, 2022), overstressing workers (North Carolina Nurses Association, 2021), and reducing income. Despite federal aid, the American Hospital Association (AHA) (2021b) estimated that more than a third of all hospitals had a negative operating margin in 2021.

¹ At least nine more hospitals in the state are not included in this analysis because they do not participate in Medicare reporting. These facilities include military and veterans' hospitals and state prison facilities.

By the Numbers:

North Carolina Health Systems and Hospitals

Spent approximately \$31 billion in 2020 on staff and operating expenses and an additional \$3 billion on new healthcare facility construction.² Slightly less than half of this spending was on staff salaries and benefits and compensation given to contract workers. This spending makes health systems and hospitals a significant economic driver, sustaining jobs and additional businesses across the state.

GDP

Gross Domestic Product (GDP) is the most common measure of the total value of income and expenditure in an economy. Health system and hospital operations generated **\$40 billion** in GDP impacts in 2020. This is roughly 6% of the total state GDP. Industry sectors with the highest amounts of indirect and induced GDP from health system and hospital spending were real estate services, employment services, banking, and insurance.

Jobs

Health systems and hospitals directly created **268,000** jobs, making them one of the 10 largest employers in 92 of North Carolina's 100 counties and a top 3 employer in 45 counties (U.S. Bureau of Labor Statistics, 2021).

Health system and hospital operations supported an additional **247,000** jobs in other industry sectors such as employment services, real estate services, restaurants, business consultants, and building services.

Altogether, more than **500,000** jobs, or 8% of all jobs in the state, were supported by health system and hospital activities.

Community Benefits

Health systems and hospitals provided **\$5.79 billion** in community benefits, which included charity care, losses from Medicare and Medicaid, graduate medical education, donations, and services (NCHA, 2021).

Health systems' and hospitals' operations, workers, and suppliers paid **\$2.5 billion** in state and local taxes, which sustained crucial public services such as K–12 education, law enforcement, and social services.

In addition, health systems and hospitals paid state fees to offset costs for programs such as Medicaid. Each year, \$112 million of the annual assessments paid by health systems and hospitals are contributed to the state's General Fund.

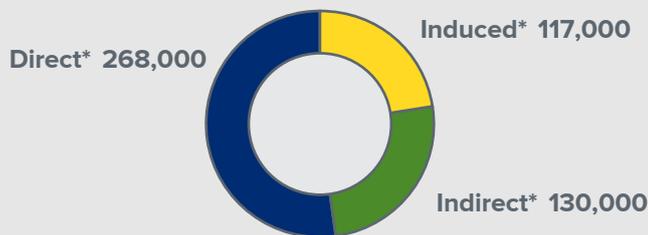


² Although 2018–2021 data were used, the majority of data were from 2020. Results are presented using 2022 dollars.

Health System and Hospital Contributions to North Carolina's Economy, 2020

TYPE OF IMPACT	STATE GDP (\$Millions)	LABOR INCOME (\$Millions)	EMPLOYMENT
Direct	\$19,313	\$17,222	268,000
Indirect	\$10,607	\$6,822	130,000
Induced	\$10,453	\$5,564	117,000
Total	\$40,373	\$29,608	515,000

Every Job in North Carolina Health Systems and Hospitals Creates Another Job in the Economy



Total jobs 515,000

Health systems and hospitals supported an additional **247,000 jobs** in other industry sectors such as real estate, employment services, management services, building services, and restaurants and food service.

45

Counties have a health system or hospital as a top 3 employer

Top 3

92

Counties have a health system or hospital as a top 10 employer

Top 10

*Indirect jobs are those sustained by health system and hospital spending among local businesses. Induced jobs are sustained by health system and hospital employees spending their wages in the local economy.

Altogether, more than **500,000 jobs**, or **8%** of all jobs in the state, were supported by health system and hospital activities.

Health Systems and Hospitals Support Jobs in Other Industries

22,339	Employment services
22,189	Real estate services
19,583	Construction of health care structures
8,598	All other food and drinking places
8,183	Limited-service restaurants
6,331	Full-service restaurants
5,601	Management consulting services
4,524	Services to buildings
4,391	Management of companies

Community Contributions



\$5.79 billion



\$2.5 billion



Contributes \$40.4 billion to North Carolina's state GDP

Purpose and Scope

NCHA engaged RTI International to provide an independent quantitative assessment of economic impacts for North Carolina as a whole and five subregions. This report describes and quantifies the jobs, wage income, total value added, taxes that result from health system and hospital operations, and the community benefits such as reduced cost care. This report also includes accounts from local institutions highlighting new initiatives, programs, and community supports. These local accounts complement the economic impact analysis by demonstrating community impacts that are not captured in economic models. NCHA health systems and hospitals engage in local grantmaking, lead and partner in community initiatives, train workers, and create innovative new ways to deliver essential healthcare services.

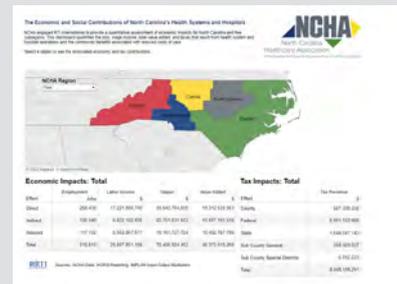
Report Methodology

RTI used the leading input-output (I-O) software in the United States, IMPLAN, to conduct the analysis. I-O analysis is designed to assess the broader economic consequences of economic activities, such as hospital operations. The economic impact analysis in this report is structured as an economic benefits assessment of how the total annual expenses of NCHA member health systems and hospitals ripple through North Carolina's economy. These expenses generate wages for hospital employees, revenues, profits, and wages to sectors that supply goods and services to health systems and hospitals. The analysis also captures the associated employment impacts and increased household spending that result from the activity in the hospital supply chain. We input hospital expenditure data to the IMPLAN software to generate I-O model results on the total economic impact of NCHA health systems and hospitals.

RTI used data on hospitals from the 2018–2021 CMS Healthcare Cost Report Information System (HCRIS). HCRIS is a rich dataset that contains a wide variety of hospital-specific data points, including data on types of services offered, number of beds, and expenses.

Online Interactive Dashboard

Descriptive information about hospitals' spending, economic impacts, and community health measures is available for North Carolina, regions of the state, and individual counties in an interactive dashboard on our website at: <https://ncha.org/economic-impact>.



The model included three primary input variables:

- operating expenses
- capital expenses
- payroll expenses

Operating expenses are regularly incurred expenses necessary for day-to-day operations. These expenses include supplies, utilities, management services, and legal services. NCHA-member health systems and hospitals often provide more services and operate facilities that may be separate from the hospital itself. Other services and facilities include the following:

- Offices of physicians
- Offices of other health practitioners
- Outpatient care centers
- Medical and diagnostic laboratories
- Home healthcare services
- Other ambulatory healthcare services
- Nursing and community care facilities

To model operating expenses correctly, RTI relied on information hospitals report to the American Hospital Association that identifies which hospitals operate these auxiliary facilities (AHA, 2021a). Once these other business activities were identified, RTI apportioned 10% of total operating expenses to each of these activities. For instance, if a hospital operates a medical office building and a nursing facility, 80% of hospital operational expenses were attributed to the hospital and 10% were attributed to the office building and 10% to the nursing facility. In addition, RTI separated operating expenses by public and private hospitals because public hospitals' sales and use taxes differ from those of private facilities.

Capital expenses are long-term investments in durable medical equipment, construction of new buildings, and structural improvements to existing facilities. For this report, RTI used six different categories of capital from the HCRIS report:

1. Land purchases
2. Land improvements
3. Construction of new facilities and fixtures
4. Building improvements
5. Fixed equipment
6. Moveable equipment

A four-year average of capital expenses from 2018–2021 was created to represent a “typical” year’s capital expenditure by health systems and hospitals. Land purchases were adjusted to reflect the actual value of professional services associated with land sales such as realtor fees, inspections, and legal fees.

Payroll expenses include all wages, salaries, and benefits paid to hospital workers. In addition, hospitals also report expenses for contract workers. Contract workers’ expenses were included in payroll expenses for modeling purposes.

NCHA provided data reported by health systems and hospitals on their community benefits, which are goods and services that address a community need. Community benefits include charity care, covering of costs that Medicare and Medicaid do not cover, graduate medical education, research, and population health.

To estimate missing data, RTI calculated per-bed operating costs for facilities in metropolitan,

micropolitan, and rural parts of North Carolina and used these per-bed costs to impute total operating, capital, and payroll expenses for facilities that did not provide complete information.

Extending Health Equity and Opportunity

The need was urgent. Elderly members of an underserved neighborhood in the Charlotte area needed to get protected from COVID-19, but many didn’t have transportation to vaccine sites or digital access to sign up for appointments.

Novant Health’s community engagement team jumped into action, taking steps such as:

- Working with faith communities to get the word out about the vaccine’s safety and to arrange rides to vaccination opportunities for those in need.
- Deploying mobile health units to priority ZIP codes across all the health system’s markets to vaccinate residents.
- Establishing a partnership between the Novant Health Foundation and Truist Bank to bring healthcare services to community centers and other neighborhood spots.
- Investing \$250,000 from the Novant Health Foundation to provide doses to underserved neighborhoods.

Novant Health and other health systems and hospitals know that making communities healthier requires access to medical care, food, adequate housing, education, and employment. They work closely with community partners to improve North Carolinians’ health, well-being, and overall lives.



Photo Courtesy of Novant Health

North Carolina Hospital Composition and Workforce

HCRIS contains information for 137 North Carolina hospitals. Nearly 70% of all hospitals are located in urban counties, and approximately 50% of hospitals have between 50 and 199 beds (see Table 1). The average number of beds per hospital is 169. Hospitals in urban counties tend to be larger, having an average of 209 beds compared with an average of 35 beds for hospitals in rural counties and 118 beds for hospitals in suburban counties.

It takes people with a variety of skills to keep a hospital operational. For every 1 physician in the hospital sector, there are 10.9 nurses; 4.5 office and administrative staff; 4.3 healthcare aides and assistants; 4.3 technologists, technicians, and emergency medical technicians; 1.4 therapists; 1.3 management staff; 1.1 building and grounds staff; 0.7 specialized care staff; and 4.7 staff in various other occupations (U.S. Department of Labor, 2021).

In terms of employment, healthcare practitioners and technical occupations make up over half of the total jobs in the hospital sector, followed by health care support occupations and office and administrative support occupations. Within this group, surgeons and physicians are the highest paid employees; they make approximately \$258,000 and \$199,000 a year, respectively. Hospitals also employ entry-level and lower-skilled workers for customer service, food service, healthcare support, office and administration, and grounds care (U.S. Department of Labor, 2021).

When you think of a hospital, what comes to mind? Doctors and nurses? Likely. But what about respiratory therapists, lab techs, chefs and cybersecurity experts? Patient care takes a team of talented people who want to do purposeful work.



Table 1. Number of Hospitals by County Designation and Number of Beds

NUMBER OF BEDS	RURAL	SUBURBAN	URBAN	TOTAL
0–49	15	4	18	37
50–199	4	18	48	70
200+	0	3	27	30
Total	19	25	93	137

Source: RTI International based on information from HCRIS.

Economic Contributions

IMPLAN provides three kinds of economic effects in the results:

Direct effects: These effects represent the economic activity occurring within health systems and hospitals in North Carolina. Examples include operating expenses; payroll and benefits; and capital expenses for property, facilities, and equipment.

Indirect effects: Also called supply chain effects, indirect effects capture the economic activity among businesses that supply goods and services to hospitals, businesses that supply those suppliers, and so forth.

Induced effects: Also referred to as household spending effects, induced effects result from employees whose wages are supported by health system and hospital expenses, directly and indirectly, spending their wages in the local economy on food, transportation, housing, and other living expenses.

NCHA members' annual operating expenses, payroll, and capital investments produce these effects.

Three common measures of economic impact can be used to summarize the statewide economic effects of health systems and hospitals:

- **State GDP:** Provides an indicator of the labor, capital, and tax income generated from production activities. Also referred to as "value-added." States use GDP to describe the size of specific industries and the economy as a whole.
- **Labor income:** Represents multiple forms of employee compensation, including wages and benefits.
- **Employment:** Consists of all full-time, part-time, and temporary positions. Jobs are reported as an annual average.

As depicted in Table 2, the total economic impacts associated with health systems and hospitals were much greater than their initial spending. **In 2020, health systems and hospitals spent approximately \$34 billion on staff, construction, and operating expenses. As this spending rippled through the economy, it generated additional jobs, wages, and value in numerous different industries.**

Digital Platform Developed to Better Care for Stroke Patients

With physicians and patients looking for ways to extend health care beyond the traditional doctor's office, remote monitoring and care coordination can provide increased support to patients who suffer a major health event such as a stroke. 1 in 4 stroke survivors suffer a second stroke, which is often preventable.

To address this growing need, clinical researchers and bioinformatic experts at **Wake Forest University School of Medicine** and stroke experts at **Atrium Health Wake Forest Baptist's Comprehensive Stroke Center** created COMPASS-CP, a digital health platform that can be embedded within electronic health records. The platform brings together healthcare providers and patients to improve health outcomes and avoid unnecessary costs by allowing clinicians to securely receive and easily interpret remote monitoring data, such as blood pressure and physical activity. This ability helps them and their patients make timely decisions and adjustments to lifestyle behaviors and medications aimed at reducing the likelihood of patients suffering future strokes.



Photo courtesy of Atrium Health Wake Forest Baptist Medical Center



Photo Courtesy of Novant Health

Health systems and hospitals maintained 268,000 jobs in North Carolina. The vast majority, 254,000, were in the healthcare sector. **Healthcare sector jobs had average wages and benefits of \$66,600 per year. This average was higher than the IMPLAN statewide average for all jobs of \$64,400.** In addition, health systems and hospitals are in a construction boom as they strive to provide services to North Carolina’s growing population. The industry spent \$3 billion in 2020 to construct new healthcare facilities. This construction supports more than 12,000 jobs in the building trades.

Through indirect, business-to-business spending and induced household spending, an additional 247,000 jobs in other industry sectors were supported. Industries with the largest impacts are depicted in Table 3. Sectors with leading employment impacts were employment services, real estate services,

healthcare building construction, restaurants and food service. **Together, more than 500,000 jobs, or 8% of all jobs in the state, were supported by health system and hospital operations in 2020.**

As mentioned above, GDP is the most common measure of the total value of income and expenditure in an economy. RTI estimated that health system and hospital operations and secondary impacts generated \$40 billion in GDP impacts across North Carolina. This dollar value is roughly 6% of the total state GDP. In 2020, North Carolina’s total GDP in 2022 dollars was approximately \$657 billion (Bureau of Economic Analysis, 2022). Industry sectors with the highest amounts of indirect and induced GDP from health system and hospital spending were real estate services, employment services, banking, and insurance. These impacts are shown in Table 3.



Table 2. Health System and Hospital Contributions to North Carolina’s Economy, 2020

TYPE OF IMPACT	STATE GDP (\$Millions)	LABOR INCOME (\$Millions)	EMPLOYMENT
Direct	\$19,313	\$17,222	268,000
Indirect	\$10,607	\$6,822	130,000
Induced	\$10,453	\$5,564	117,000
Total	\$40,373	\$29,608	515,000

Source: RTI International analysis of HCRIS data; IMPLAN 2022. Values are expressed in 2022 dollars.

Table 3. Leading Employment and State GDP Impacts by Sector, 2020

RANK	DESCRIPTION	DIRECT	INDIRECT	INDUCED	TOTAL
Top Employment Impacts					
1	Health systems and hospitals	253,658	3,666	17,196	274,520
2	Employment services	-	19,937	2,402	22,339
3	Real estate services	97	18,005	4,087	22,189
4	Healthcare building construction	12,786	6,797	-	19,583
5	Other food and drinking places	-	5,427	3,171	8,598
6	Limited-service restaurants	-	1,341	6,841	8,183
7	Full-service restaurants	-	-	6,331	6,331
8	Business consultants	-	4,927	673	5,601
9	Buildings services	-	3,529	996	4,524
10	Corporate management	-	3,432	959	4,391
Top State GDP Impacts (\$ millions)					
1	Health systems and hospitals	\$18,366	\$459	\$1,231	\$20,056
2	Real estate services	\$7	\$1,189	\$271	\$1,468
3	Employment services	\$-	\$1,082	\$171	\$1,254
4	Healthcare building construction	\$791	\$-	\$-	\$791
5	Monetary authorities (banks)	\$-	\$382	\$391	\$774
6	Insurance carriers, except life	\$-	\$562	\$182	\$744
7	Corporate management	\$-	\$497	\$141	\$638
8	Full-service restaurants	\$-	\$254	\$254	\$508
9	Legal services	\$-	\$364	\$133	\$498
10	Business consulting	\$-	\$434	\$59	\$493

Note: The sector with the second highest GDP was the owner-occupied dwellings sector, which accounts for the value of home ownership. This sector has no employment and is not listed in this table.

Source: RTI analysis of HCRIS data: IMPLAN 2022.

Community Benefits

In 2021, North Carolina health systems and hospitals provided \$5.79 billion of community benefits.

Community benefits were from four major sources:

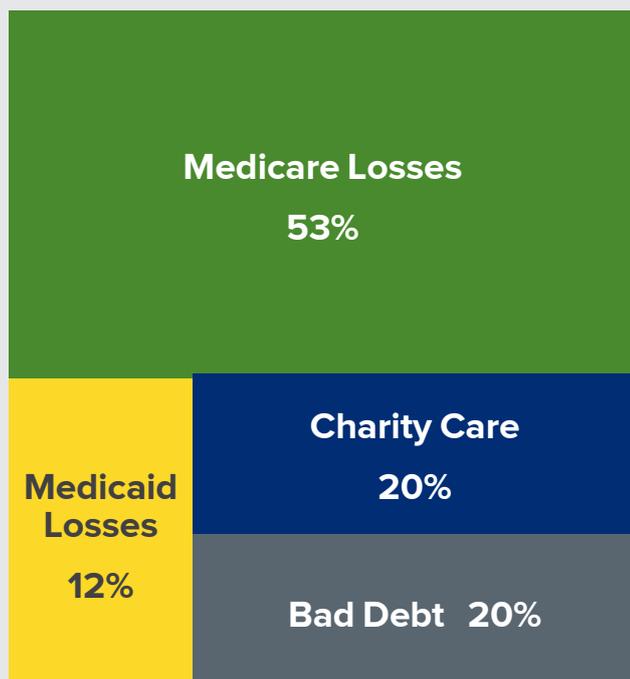
Medicare losses: Every hospital treats Medicare patients; most people aged 65 or older are covered by federal health insurance. Medicare losses reflect hospitals providing services to the Medicare population without getting full reimbursement.

Charity care: This source comes from either free or discounted care directed toward the community's poor who cannot pay for hospital services. Patients are eligible if they qualify under the hospital's financial assistance policy.

Bad debt: Bad debt is compensation owed to hospital accounts that remains unpaid after efforts to collect it are exhausted.

Medicaid losses: Medicaid is a joint federal-state program that provides health coverage to certain categories of individuals in need, including people with disabilities and low incomes. Medicaid losses reflect hospitals providing services to the Medicaid population without getting full reimbursement.

2021 Community Benefits by Category (Percentage)



Source: NCHA, 2021.

Hospitals Provide Compassionate Care for Cancer Patients

Throughout North Carolina, hospitals large and small provide cancer care to patients in progressive facilities that offer advanced therapies. Most people prefer to stay in their community to receive treatment and support, and all hospitals that offer cancer services to North Carolinians work hard to provide high-quality and compassionate care.

For example, the UNC Rex Cancer Center recently opened in a new, four-story building across the street from UNC Rex's main Raleigh campus. Designed with input from patients and their families, services include a Quality of Life Clinic with a variety of support services for cancer patients, including behavioral health care, rehabilitation services, and holistic treatment.

Hugh Chatham Memorial Hospital in Elkin serves patients from throughout the Yadkin Valley with radiation therapy and medical oncology services in partnership with the Comprehensive Cancer Center at Atrium Health Wake Forest Baptist Medical Center. The relationship allows patients and their families to avoid the added burden of traveling to other centers.

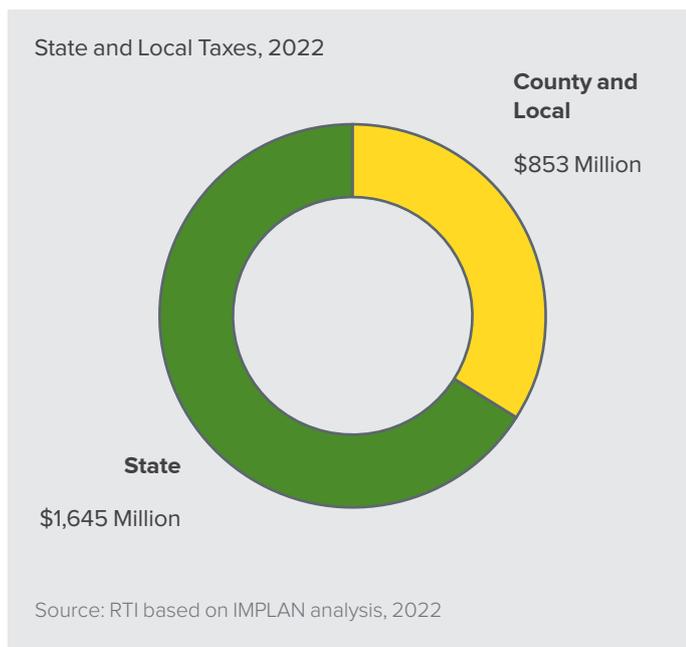
Atrium Health Wake Forest Baptist recently announced they have received a 2-year \$380,000 grant from Teen Cancer America and First Citizens Bank that will allow them to develop an oncology program specifically for adolescents and young adults undergoing cancer treatment at their National Cancer Institute–designated Comprehensive Cancer Center and at Brenner Children's Hospital.

In the Sandhills, FirstHealth of the Carolinas plans to open a comprehensive cancer center in Pinehurst in early 2023. The 120,000-square-foot building will bring together all of FirstHealth's outpatient cancer treatments in a single location. It will also house services such as palliative care, research and clinical trials, nutrition services, and a wellness center.

Taxes and Fees

Each year, health systems’ and hospitals’ operations, workers, and suppliers generate \$2.5 billion in state and local tax revenue. In North Carolina hospitals also pay to help offset the cost of drawing down federal dollars for Medicaid for state use and additional assessments to support community programs.

North Carolina hospitals pay funds (in the form of assessments and inter-governmental transfers to the state) each year to fund a portion of North Carolina’s state share of funding the North Carolina Medicaid program. The Medicaid program is jointly funded by the federal government and states. The federal government pays states for a specified percentage of the program expenditures, called the Federal Medical Assistance Percentage, and states must ensure they can fund the remaining share required (the non-federal share). As part of this funding, North Carolina hospitals pay the non-federal share of the graduate medical education (GME) payments available to teaching hospitals that operate a Medicare-approved GME program. Hospitals also contribute at least \$112 million annually to the state’s General Fund and \$44 million in funding for postpartum Medicaid coverage for eligible mothers.



In state fiscal year 2023, hospital assessments will increase to approximately \$1 billion annually as federal public health funding to respond to COVID-19 ends and additional state assessments are placed on hospitals.

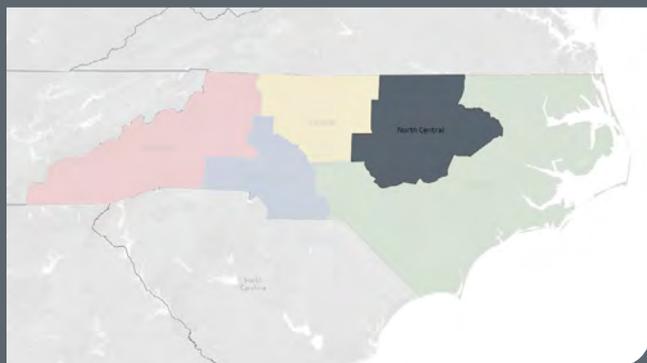
Beginning April 1, 2024, hospitals have been directed to pay an additional assessment to fund home and community based services. For state fiscal year 2023 (July 1, 2023 - June 30, 2024) the payment is \$36 million. In state fiscal year 2024, this amount will be at least \$142 million annually. The Home-and Community-based Services Medicaid program promotes community living, improves quality of life, and enhances access to services to enable independence, productivity, integration, and inclusion for older adults and individuals with disabilities. Although these fees and assessments are not traditional taxes, they are another mechanism through which North Carolina health system and hospital resources fund public health programs.

By the Numbers: 2023 State Assessments

PROGRAM	ANNUAL (\$Millions)
General Fund	\$112
Medicaid Fee-for-Service and Managed Care	\$749
Graduate Medical Education	\$67
Postpartum (expires 2027)	\$44
Home-and Community-based Services (starts April 2024)	\$36
Total Assessments	\$1,008

Source: NCHA, 2022.

Impact Summary for North Carolina's North Central Region



The North Central (Triangle) Region of North Carolina contains Raleigh, Durham, Chapel Hill, and the counties within the greater Raleigh area. The region includes 27 health systems or hospitals: 13 of these are public and 14 are private. The North Central Region has the highest levels of economic contributions by health systems and hospitals in the state. Health systems and hospitals generated and sustained more than 150,000 jobs in the region and provided \$9.5 billion in salaries, wages, and benefits to workers.

Table 4. Health System and Hospital Contributions to North Carolina's North Central Region, 2020

TYPE OF IMPACT	STATE GDP (\$Millions)	LABOR INCOME (\$Millions)	EMPLOYMENT	COUNTY AND LOCAL TAXES (\$Millions)
Direct	\$5,987.5	\$5,327.8	73,000	\$54.6
Indirect	\$3,725.0	\$2,378.1	41,000	\$86.4
Induced	\$3,442.8	\$1,841.9	37,000	\$122.8
Total	\$13,155.3	\$9,547.8	151,000	\$263.8

Source: RTI International analysis of HCRIS data; IMPLAN 2022. Values are expressed in 2022 dollars.

North Central Counties with a Health System/Hospital as a Top 3 Employer

Chatham County (*UNC Health*)

Durham County (*Duke University Medical Center*)

Granville County (*North Carolina Department of Health and Human Services*)

Johnston County (*UNC Health Johnston*)

Nash County (*Nash UNC Health Care*)

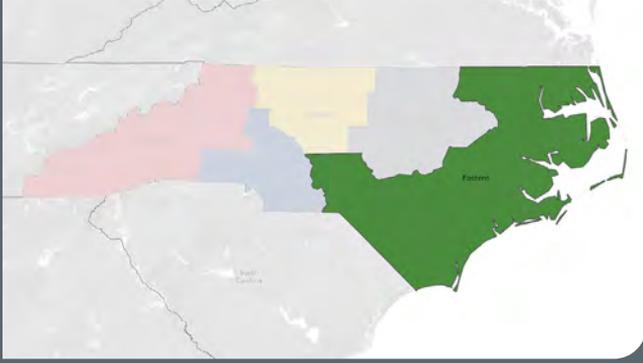
Orange County (*UNC Health*)

Wake County (*WakeMed Health and Hospitals*)

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2021.

In addition, the following counties have health systems or hospitals as a top 10 employer: Edgecombe County, Harnett County, Person County, Vance County, Warren County, and Wilson County. The average health system and hospital employment compensation, which consists of wages, salaries, and benefits, is \$69,995.

Impact Summary for North Carolina's Eastern Region



The Eastern Region stretches from Moore County eastward to the Outer Banks. In accordance with its comparatively large geographic area, this region contains the largest number of hospitals in North Carolina with 37 total health systems or hospitals. Of these 37 health systems or hospitals, 22 are public and 15 are private. Health systems and hospitals supported more than 100,000 jobs in 2020 and provided workers with \$5.0 billion in salaries, wages, and benefits.

Table 5. Health System and Hospital Contributions to North Carolina's Eastern Region, 2020

TYPE OF IMPACT	STATE GDP (\$Millions)	LABOR INCOME (\$Millions)	EMPLOYMENT	COUNTY AND LOCAL TAXES (\$Millions)
Direct	\$3,904.0	\$3,583.8	64,000	\$28.8
Indirect	\$1,298.8	\$812.0	22,000	\$39.2
Induced	\$1,288.4	\$633.1	17,000	\$57.8
Total	\$6,491.2	\$5,028.9	103,000	\$125.7

Source: RTI International analysis of HCRIS data; IMPLAN 2022. Values are expressed in 2022 dollars.

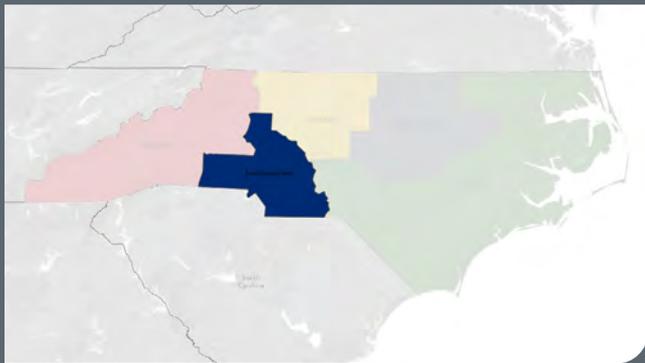
Eastern Region Counties with a Health System/Hospital as a Top 3 Employer

- Beaufort County (*ECU Health*)
- Carteret County (*Carteret Health Care*)
- Chowan County (*ECU Health*)
- Craven County (*CarolinaEast Health System*)
- Cumberland County (*Cape Fear Valley Health System*)
- Dare County (*ECU Health*)
- Halifax County (*ECU Health*)
- Hertford County (*ECU Health*)
- Jones County (*CarolinaEast Health System*)
- Lenoir County (*North Carolina Department of Health & Human Services*)
- Moore County (*FirstHealth of the Carolinas*)
- New Hanover County (*Novant New Hanover Regional Medical Center*)
- Pasquotank County (*Sentara Albemarle Medical Center*)
- Pitt County (*ECU Health*)
- Richmond County (*FirstHealth of the Carolinas*)
- Robeson County (*UNC Health Southeastern*)
- Scotland County (*Scotland Health Care System*)
- Wayne County (*Wayne UNC Health Care*)

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2021.

In addition, the following counties have health systems or hospitals as a top 10 employer: Bertie County, Bladen County, Brunswick County, Columbus County, Duplin County, Gates County, Greene County, Hoke County, Martin County, Montgomery County, Onslow County, Pamlico County, Pender County, Sampson County, and Washington County. The average health system and hospital employment compensation, which consists of wages, salaries, and benefits, is \$56,195.

Impact Summary for North Carolina's Southwest Region



Health systems and hospitals in the Southwest Region of North Carolina serve the largest population in the state. The region spans from Cleveland to Anson County and shares a border with South Carolina. The region includes 28 different health systems or hospitals, and 17 are public and 11 are private. Currently, Novant Health is building a new medical facility in the South Charlotte area of Mecklenburg County. With an investment totaling approximately \$180 million, the 168,000-square-foot medical facility is scheduled to open in 2023. Health systems and hospitals supported 96,000 jobs in 2020 and provided workers with more than \$6.1 billion in salaries, wages, and benefits.

Table 6. Health System and Hospital Contributions to North Carolina's Southwest Region, 2020

TYPE OF IMPACT	STATE GDP (\$Millions)	LABOR INCOME (\$Millions)	EMPLOYMENT	COUNTY AND LOCAL TAXES (\$Millions)
Direct	\$3,498.5	\$3,270.3	49,000	\$19.4
Indirect	\$2,715.1	\$1,773.1	27,000	\$67.1
Induced	\$2,018.9	\$1,082.5	20,000	\$80.5
Total	\$8,232.5	\$6,125.9	96,000	\$166.9

Source: RTI International analysis of HCRIS data; IMPLAN 2022. Values are expressed in 2022 dollars.

Southwest Region Counties with a Health System/Hospital as a Top 3 Employer

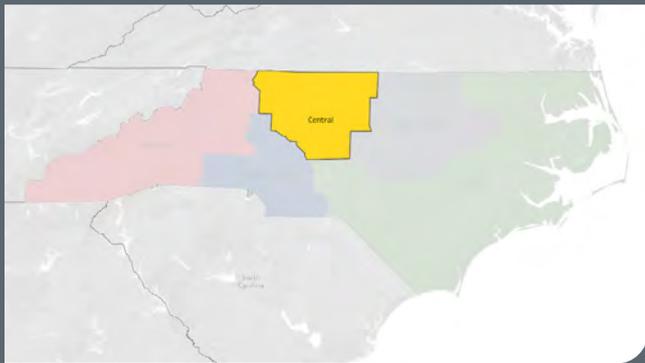
Cabarrus County (Atrium Health)
 Cleveland County (Atrium Health)
 Gaston County (CaroMont Health)

Mecklenburg County (Atrium Health)
 Rowan County (Veterans Administration)
 Stanly County (Atrium Health)

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2021.

In addition, the following counties have health systems or hospitals as a top 10 employer: Anson County, Iredell County, Lincoln County, and Union County. The average health system and hospital employment compensation, which consists of wages, salaries, and benefits, is \$67,296.

Impact Summary for North Carolina's Central Region



North Carolina's Central Region reaches from Surry County to Caswell County and contains the communities of Greensboro, Winston-Salem, and High Point. This region has a total of 17 different health systems or hospitals. Of these 17 health systems or hospitals, 3 are public and 14 are private. Health systems and hospitals supported more than 90,000 jobs in 2020 and provided workers with \$5.0 billion in salaries, wages, and benefits.

Table 7. Health System and Hospital Contributions to North Carolina's Central Region, 2020

TYPE OF IMPACT	STATE GDP (\$Millions)	LABOR INCOME (\$Millions)	EMPLOYMENT	COUNTY AND LOCAL TAXES (\$Millions)
Direct	\$3,561.1	\$2,956.0	47,000	\$46.7
Indirect	\$1,686.1	\$1,081.4	23,000	\$43.7
Induced	\$1,793.4	\$978.9	21,000	\$65.8
Total	\$7,040.6	\$5,016.3	91,000	\$156.3

Source: RTI International analysis of HCRIS data; IMPLAN 2022. Values are expressed in 2022 dollars.

Central Region Counties with a Health System/Hospital as a Top 3 Employer

Alamance County (*Cone Health Alamance Regional Medical Center*)

Forsyth County (*Novant Health Forsyth Medical Center, Atrium Health Wake Forest Baptist*)

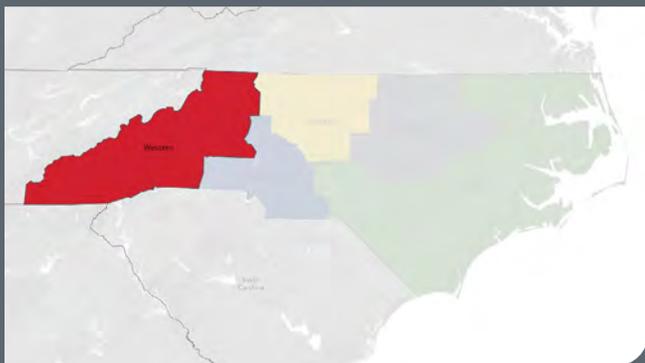
Guilford County (*Cone Health*)

Surry County (*Northern Regional Hospital*)

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2021.

In addition, the following counties have health systems or hospitals as a top 10 employer: Caswell County, Davie County, Randolph County, Rockingham County, Stokes County, and Yadkin County. The average health system and hospital employment compensation, which consists of wages, salaries, and benefits, is \$64,090.

Impact Summary for North Carolina's Western Region



North Carolina's Western Region begins at the Tennessee/North Carolina border and includes the 25 most western counties in the state. This region has 28 different health systems or hospitals. Of these 28 health systems or hospitals, 7 are public and 21 are private. Currently, Mission Health is planning to open a new behavioral health facility in Asheville in early 2023, which will increase access to behavioral health care in the region. Health systems and hospitals supported more than 60,000 jobs in 2020 and provided workers with \$3.1 billion in salaries, wages, and benefits.

Table 8. Health System and Hospital Contributions to North Carolina's Western Region, 2020

TYPE OF IMPACT	STATE GDP (\$Millions)	LABOR INCOME (\$Millions)	EMPLOYMENT	COUNTY AND LOCAL TAXES (\$Millions)
Direct	\$2,361.4	\$2,084.1	34,000	\$24.9
Indirect	\$763.7	\$516.2	14,000	\$25.1
Induced	\$933.5	\$506.5	13,000	\$40.8
Total	\$4,058.6	\$3,106.8	61,000	\$90.9

Source: RTI International analysis of HCRIS data; IMPLAN 2022. Values are expressed in 2022 dollars.

Western Region Counties with a Health System/Hospital as a Top 3 Employer

Buncombe County (*Mission Health*)

Burke County (*UNC Health Blue Ridge, North Carolina Department of Health & Human Services*)

Catawba County (*Catawba Valley Medical Center*)

Cherokee County (*Erlanger Western Carolina Hospital*)

Haywood County (*Haywood Regional Medical Center, a Duke LifePoint Hospital*)

Henderson County (*Pardee UNC Health Care*)

Jackson County (*Harris Regional Hospital, a Duke LifePoint Hospital*)

Polk County (*St. Luke's Hospital*)

Watauga County (*Appalachian Regional Healthcare System*)

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2021.

In addition, the following counties have health systems or hospitals as a top 10 employer: Alleghany County, Ashe County, Avery County, Caldwell County, Clay County, Graham County, Macon County, Madison County, Mitchell County, Rutherford County, Swain County, Transylvania County, Wilkes County, and Yancey County. The average health system and hospital employment compensation, which consists of wages, salaries, and benefits, is \$62,870.

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All vignettes and photos provided by North Carolina Healthcare Association.