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Maine Hospital Association

MAINE'S LEADING
VOICE FOR HEALTHCARE

The Economic Contribution of Maine's Hospitals

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Summary

Maine’s hospitals are some of the largest and most active economic and civic institutions in the state, employing thousands and spending billions of dollars. This analysis quantifies hospitals’ economic contribution to Maine and its regions. The results reveal a robust and growing industry making significant economic contributions across the state.

In 2016, Maine hospitals directly employed almost 33,000 people and paid over \$2.5 billion in salaries and benefits. Their total spending was \$5.7 billion, including \$5.5 billion in operating expenses and \$231.8 million in capital expenditures. As that money circulated through the Maine economy, it generated an additional \$4.5 billion in indirect and induced economic activity¹, leading to a total economic contribution of over \$10 billion. This supported a total of 67,000 jobs, \$4 billion in wages and benefits, and almost \$400 million in state and local taxes.

| | Spending | Jobs (FTE) | Income |
|----------------------------|-------------------------|---------------|------------------------|
| Hospitals | \$5,495,770,000 | 32,870 | \$2,501,428,000 |
| Capital Expenditures | \$231,785,000 | 1,100 | \$66,570,000 |
| Direct Contribution | \$5,727,555,000 | 33,970 | \$2,567,998,000 |
| Indirect Contribution | \$1,823,100,000 | 12,730 | \$606,536,000 |
| Induced Contribution | \$2,672,900,000 | 20,170 | \$845,148,000 |
| Total Contribution | \$10,223,555,000 | 66,870 | \$4,019,682,000 |
| Multiplier | 1.8 | 2.0 | 1.6 |
| State Taxes | \$396,571,000 | - | - |
| Federal Taxes | \$842,152,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research

In addition to these statewide contributions, Maine hospitals play vital roles within their regions. They provide access to medical care that allows rural communities to sustain their populations and they employ thousands of rural residents. In nine of Maine’s sixteen counties, hospitals are the largest private employer.²

To set this analysis into context, the next section summarizes recent trends in the hospital and healthcare industries in Maine. Hospitals’ economic contributions follow, first for the state as a whole, then for each county. Appendix A explains the methodology used to estimate these economic contributions. Appendix B lists the Maine Hospital Association’s member hospitals included in the analysis. And Appendix C is a detailed table of hospitals’ expenditures and economic contributions by county.

¹ Indirect and induced economic contributions are the “ripple” or “multiplier” effects resulting from the hospitals’ spending and employment. See Appendix C for more details.

² Based on average monthly employment for the third quarter of 2016 from the Maine Department of Labor.



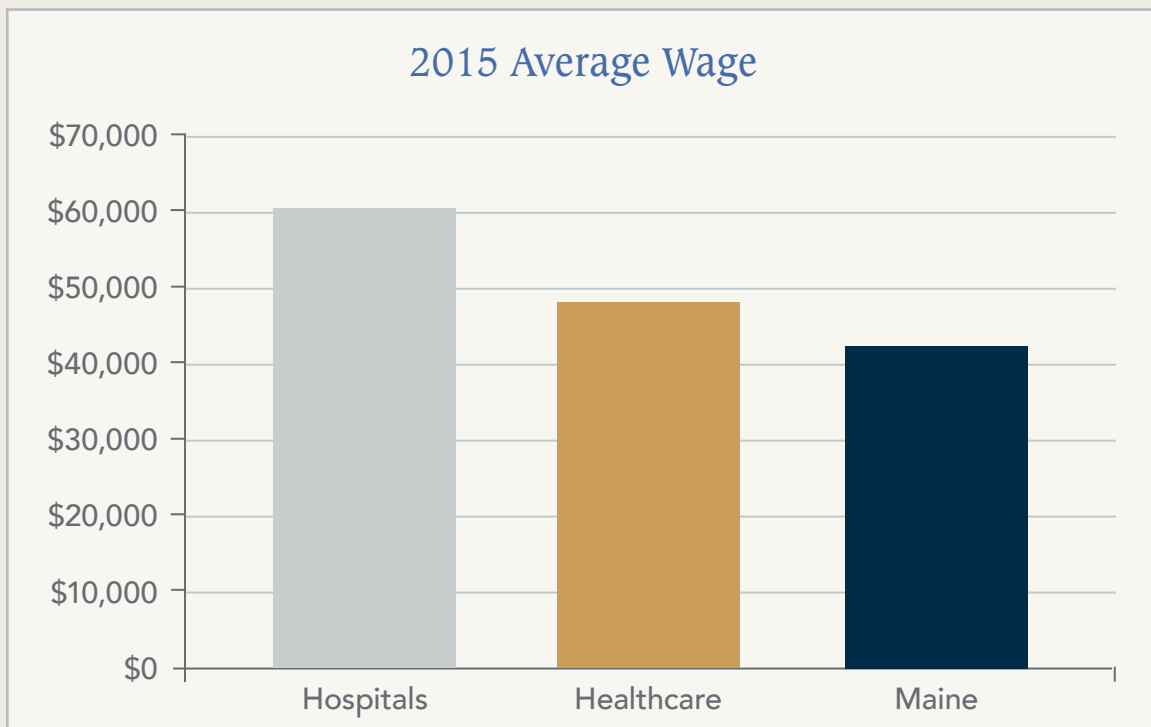
Industry Trends

Hospitals are the core of the healthcare industry, accounting for 40% of employment, 50% of wages, and 60% of output of that large and growing sector.³ In 2015 (the most recent year available), the Maine hospital industry employed over 36,000 or 6% of all people working in Maine; paid over \$2 billion or 9% of all wages; and were responsible for \$3.7 billion or 6% of Maine's total economic output (gross state product).⁴

| | Total, All Maine Industries | Healthcare | | Hospitals | |
|---------------|--------------------------------|---------------|------------|---------------|------------|
| | | Value | Percentage | Value | Percentage |
| Jobs | 596,000 | 89,000 | 15% | 36,000 | 6% |
| Wages | \$24.9 billion | \$4.3 billion | 17% | \$2 billion | 9% |
| Output | \$57.3 billion | \$6 billion | 10% | \$3.7 billion | 6% |

Source: U.S. Department of Labor, U.S. Bureau of Economic Analysis, 45 North Research

There are a variety of jobs within a hospital, but in general, hospital jobs are good jobs that pay above average wages. In 2015, the average wage of a hospital employee was \$60,500, fully 45% higher than the state average.

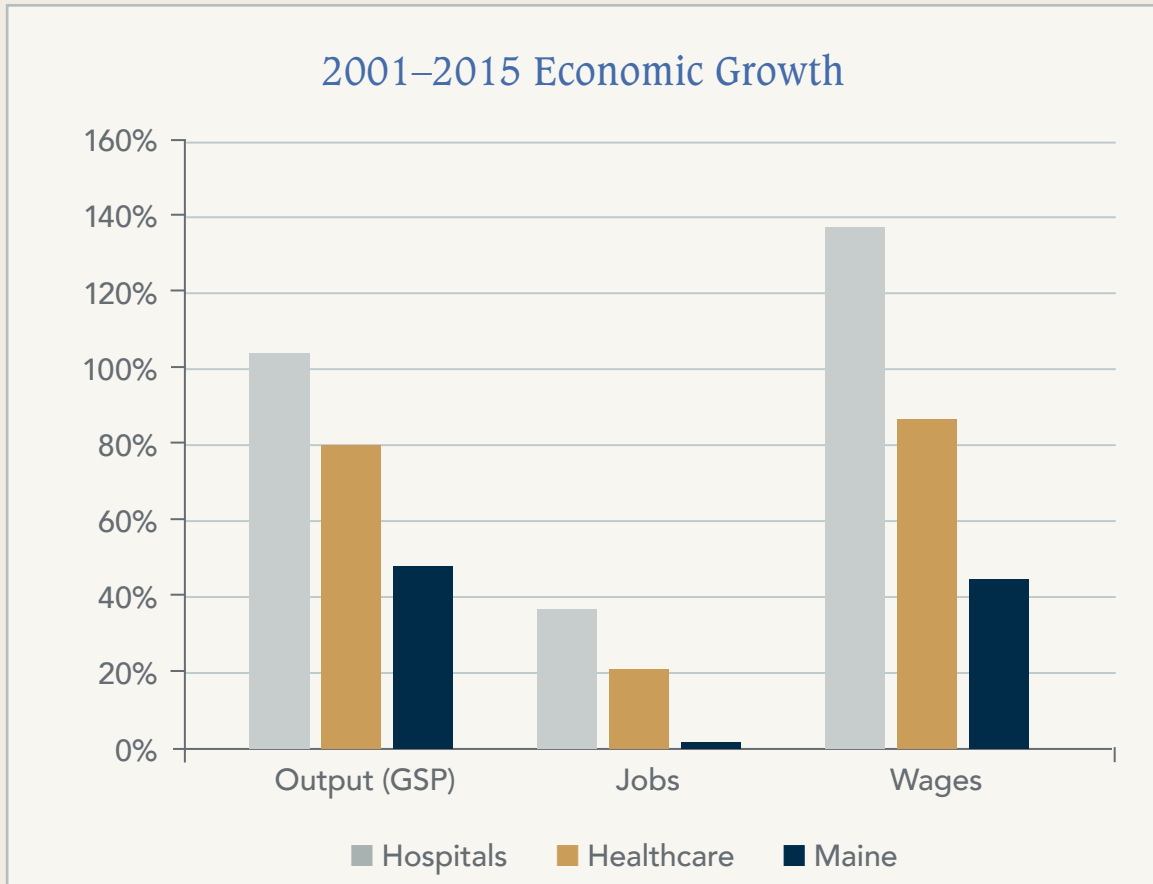


Source: U.S. Department of Labor, U.S. Bureau of Economic Analysis, 45 North Research

³ Other businesses in the healthcare sector include nursing and residential care facilities, home healthcare services, and the offices of medical professionals such as physicians and dentists.

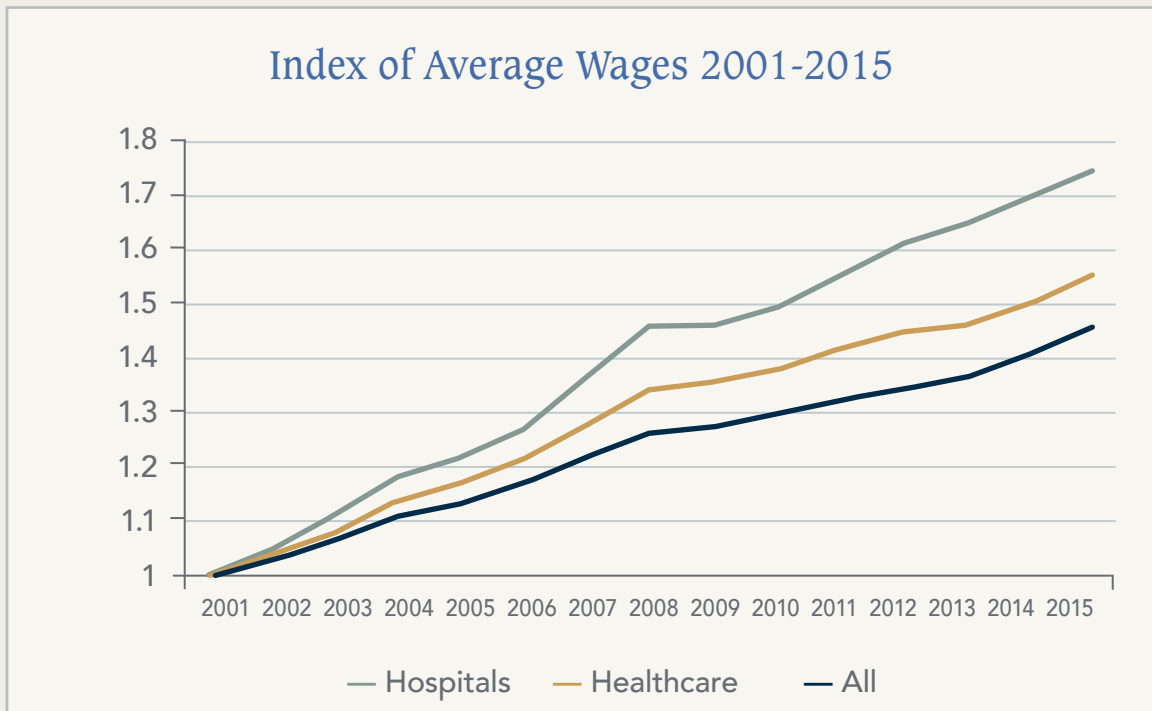
⁴ In order to compare hospitals' economic activity over time, publicly available data for the hospital industry were used. This data differ slightly from the economic contribution analysis below in three ways: state-run hospitals are not included in the economic analysis; the economic analysis uses data for the 2016 fiscal year ending 9/30/16, whereas the public data are for calendar year 2016; and the public data are for wages only, whereas the survey data include wages and benefits.

Since 2001, economic activity associated with hospitals has grown considerably faster than both the broader healthcare industry and the overall Maine economy. The level of output (gross state product) associated with hospitals has more than doubled, compared with an 80% growth in healthcare and a 48% increase in Maine's total gross state product. Hospital jobs have increased 36% compared to 22% for healthcare and flat job growth (0%) across all Maine industries. Total hospital wages have increased 136%, compared to 88% for healthcare and 46% for all industries.



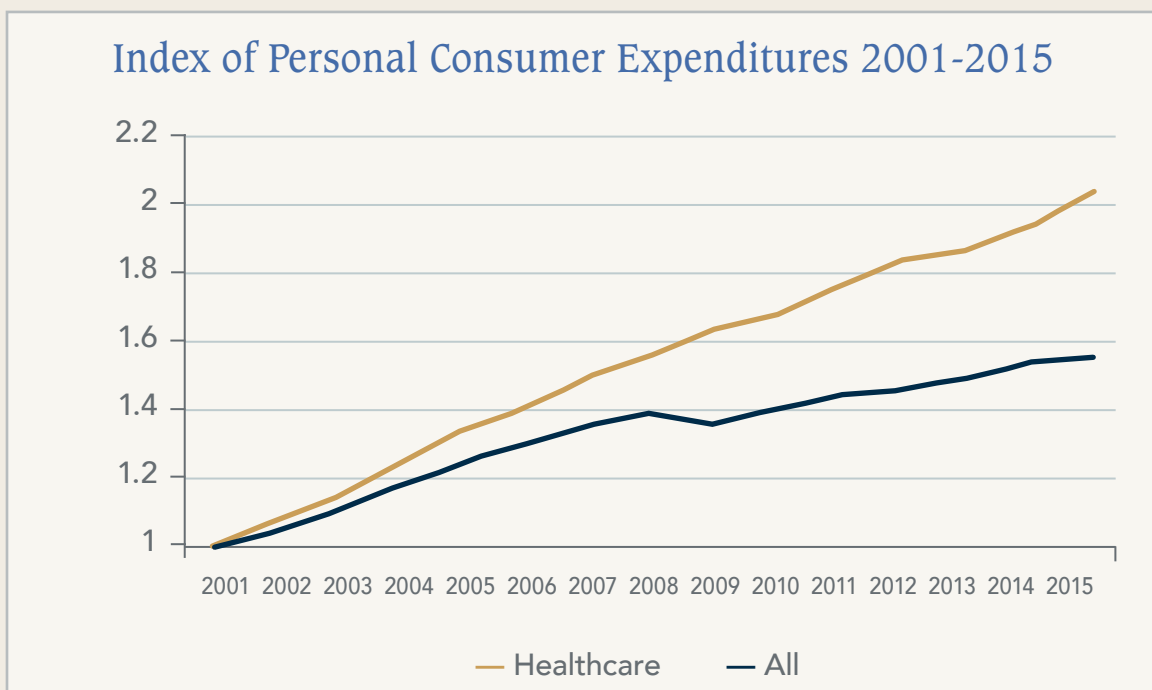
Source: U.S. Department of Labor, U.S. Bureau of Economic Analysis, 45 North Research

The growth of total wages paid by Maine hospitals reflects an increase in the number of hospital jobs combined with an even larger increase in their average pay compared to other industries. The chart below shows the relative growth of hospital wages since 2001.



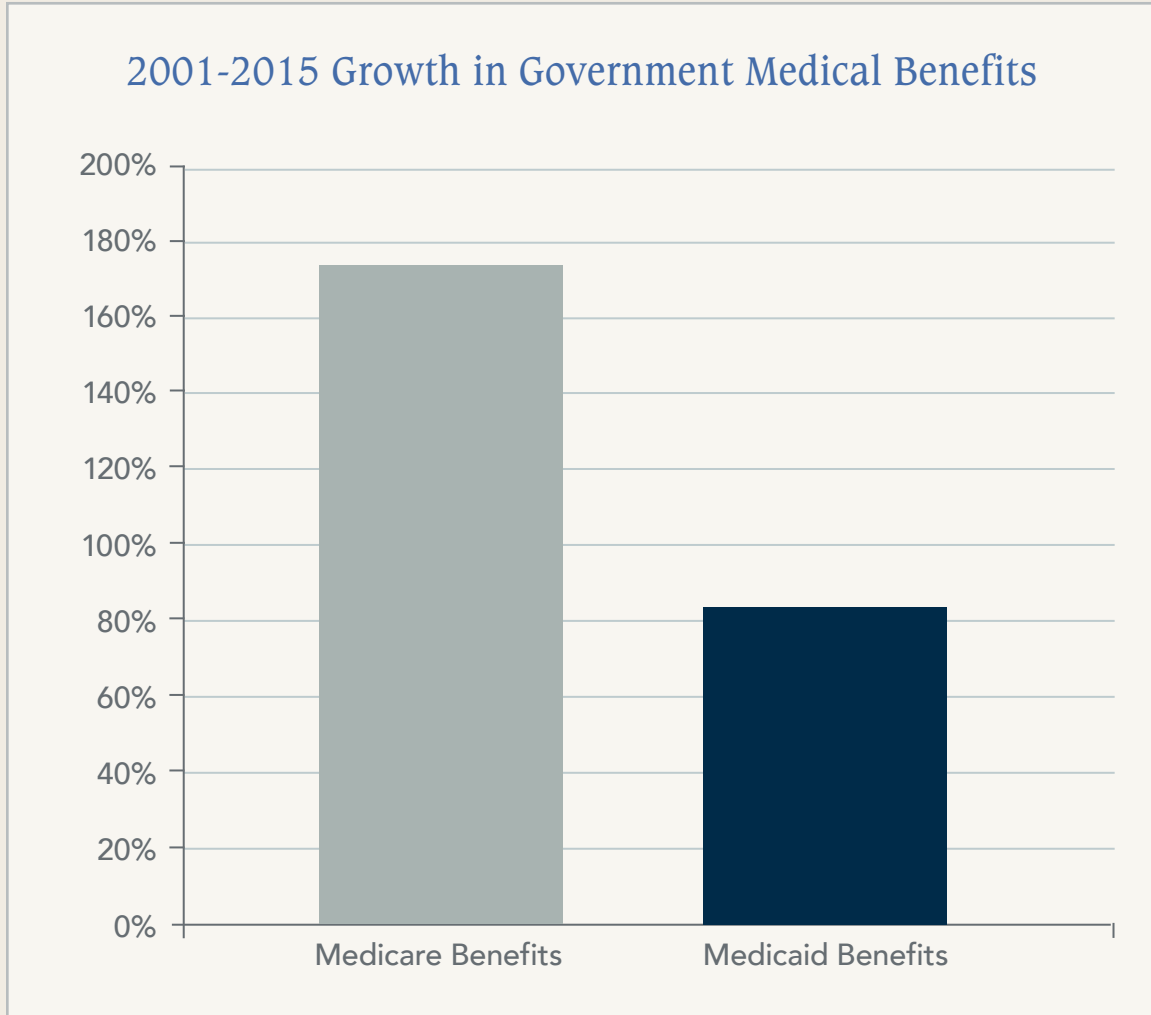
Source: U.S. Department of Labor, 45 North Research

Behind much of the recent economic growth in hospitals are large increases in the amount of spending by consumers on healthcare. Consumer expenditures on healthcare have doubled since 2001, while expenditures on non-healthcare goods and services have risen 57%.



Source: U.S. Bureau of Economic Analysis, 45 North Research

Government health expenditures have also increased during this time. Since 2001, total Medicare payments have increased 174% and Medicaid payments have risen 84%. (These increases reflect, in general, more people served by these programs.)



Source: U.S. Department of Labor, U.S. Bureau of Economic Analysis, 45 North Research
"Inflation" = the change in the Personal Consumption Expenditures Price Index

Economic Contribution of Maine Hospitals

This section details the economic contributions of Maine hospitals as estimated from their operational spending, capital expenditures, and employment. 45 North Research and Charles Lawton, Ph.D., former chief economist at Planning Decisions, Inc, conducted this research using data from MHA's 36 member hospitals⁵ (herein called "Maine hospitals") and IMPLAN, an input-output economic modeling system (described in more detail in Appendix B). Unique IMPLAN models were created for the statewide analysis and for each of the counties. The results reveal a robust industry making significant contributions across the state.

Statewide

In 2016⁶, Maine hospitals spent \$5.7 billion in the Maine economy. Operational spending totaled \$5.5 billion, including \$2.5 billion for payroll. Capital expenditures totaled \$231.8 million, of which \$141.4 million (61%) was for equipment and \$78.3 million (34%) was for new building construction or renovations. Maine hospitals employed almost 33,000 people, and an additional 1,100 people were employed as a result of their capital expenditures.

Based on the IMPLAN analysis, Maine hospitals' \$5.7 billion in direct economic activity resulted in a total economic contribution of \$10.2 billion in output, \$4.0 billion in earnings, and 66,870 jobs. The activity also generated approximately \$396.6 million in state and local taxes and \$842.1 million in federal taxes. As points of reference, in 2016, Maine had an annual employment of \$604,000 and total annual wages of \$25.7 billion (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|-------------------------|---------------|------------------------|
| Hospitals | \$5,495,770,000 | 32,870 | \$2,501,428,000 |
| Capital Expenditures | \$231,785,000 | 1,100 | \$66,570,000 |
| Direct Contribution | \$5,727,555,000 | 33,970 | \$2,567,998,000 |
| Indirect Contribution | \$1,823,100,000 | 12,730 | \$606,536,000 |
| Induced Contribution | \$2,672,900,000 | 20,170 | \$845,148,000 |
| Total Contribution | \$10,223,555,000 | 66,870 | \$4,019,682,000 |
| Multiplier | 1.8 | 2.0 | 1.6 |
| State Taxes | \$396,571,000 | - | - |
| Federal Taxes | \$842,152,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research

⁵ MHA represents all hospitals in the state except for those that are state or federally run (e.g., Dorothea Dix, Riverview, Togus).

⁶ Data were collected for the fiscal year starting October 1, 2015 and ending September 30, 2016.

Androscoggin County

Androscoggin County is home to two hospitals: Central Maine Medical Center and St. Mary’s Regional Medical Center. Collectively, these hospitals spent \$583.9 million in the Maine economy in 2016. The hospitals employed 3,110 people and paid \$257.8 million in wages and benefits. An additional 100 jobs and \$6.1 million in wages resulted from their capital expenditures. This spending circulated through Androscoggin County, resulting in a total economic contribution of \$926 million in output, \$354.1 million in earnings and 5,560 jobs. It generated an estimated \$39.8 million in state and local taxes and \$84.6 million in federal taxes.

As points of reference, in 2016, Androscoggin County had an annual employment of 49,000 and total annual wages of \$2 billion (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|--------------|----------------------|
| Hospitals | \$562,452,000 | 3,110 | \$257,820,000 |
| Capital Expenditures | \$21,408,000 | 100 | \$6,050,000 |
| Direct Contribution | \$583,860,000 | 3,210 | \$263,870,000 |
| Indirect Contribution | \$117,940,000 | 830 | \$30,423,000 |
| Induced Contribution | \$224,202,000 | 1,520 | \$59,814,000 |
| Total Contribution | \$926,002,000 | 5,560 | \$354,107,000 |
| Multiplier | 1.6 | 1.7 | 1.3 |
| State Taxes | \$39,835,000 | - | - |
| Federal Taxes | \$84,629,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY JOANNE FORTIN

Aroostook County

Aroostook County is home to four hospitals: Cary Medical Center, Houlton Regional Hospital, Northern Maine Medical Center and The Aroostook Medical Center. Collectively, these hospitals spent \$282.9 million in the Maine economy in 2016. The hospitals employed 1,900 people and paid \$124.6 million in wages and benefits. An additional 80 jobs and \$4.8 million in wages resulted from their capital expenditures. This spending circulated through Aroostook County, resulting in a total economic contribution of \$393.3 million in output, \$158.1 million in earnings and 2,870 jobs. It generated an estimated \$16.9 million in state and local taxes and \$35.9 million in federal taxes.

As points of reference, in 2016, Aroostook County had an annual employment of 27,000 and total annual wages of \$969.8 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|--------------|----------------------|
| Hospitals | \$266,043,000 | 1,900 | \$124,648,000 |
| Capital Expenditures | \$16,899,000 | 80 | \$4,800,000 |
| Direct Contribution | \$282,942,000 | 1,980 | \$129,448,000 |
| Indirect Contribution | \$45,270,980 | 340 | \$11,218,000 |
| Induced Contribution | \$65,077,000 | 550 | \$17,451,000 |
| Total Contribution | \$393,289,980 | 2,870 | \$158,117,000 |
| Multiplier | 1.4 | 1.5 | 1.2 |
| State Taxes | \$16,866,000 | - | - |
| Federal Taxes | \$35,937,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY JOANNE FORTIN

Cumberland County

Cumberland County is home to six hospitals: Bridgton Hospital, Maine Medical Center, Mercy Hospital, Mid Coast Hospital, Maine Behavioral Healthcare/Spring Harbor Hospital and New England Rehabilitation Hospital of Portland. Collectively, these hospitals spent \$1.9 billion in the Maine economy in 2016. The hospitals employed 10,740 people and paid \$859.7 million in wages and benefits. An additional 320 jobs and \$19.3 million in wages resulted from their capital expenditures. This spending circulated through Cumberland County, resulting in a total economic contribution of \$3.4 billion in output, \$1.3 billion in earnings and 19,760 jobs. It generated an estimated \$147.5 million in state and local taxes and \$313 million in federal taxes.

As points of reference, in 2016, Cumberland County had an annual employment of 179,000 and total annual wages of \$8.7 billion (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|------------------------|---------------|------------------------|
| Hospitals | \$1,813,160,000 | 10,740 | \$859,677,000 |
| Capital Expenditures | \$67,063,000 | 320 | \$19,300,000 |
| Direct Contribution | \$1,880,223,000 | 11,060 | \$878,977,000 |
| Indirect Contribution | \$609,192,000 | 3,220 | \$174,514,000 |
| Induced Contribution | \$936,351,000 | 5,480 | \$270,798,000 |
| Total Contribution | \$3,425,766,000 | 19,760 | \$1,324,289,000 |
| Multiplier | 1.8 | 1.8 | 1.5 |
| State Taxes | \$147,466,000 | - | - |
| Federal Taxes | \$313,005,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY MARTHA G. HOLDEN

Franklin County

Franklin County is home to one hospital: Franklin Memorial Hospital. In 2016, Franklin Memorial Hospital spent \$82.3 million in the Maine economy. The hospital employed 530 people and paid \$36.9 million in wages and benefits. An additional 10 jobs and \$0.5 million in wages resulted from their capital expenditures. This spending circulated through Franklin County, resulting in a total economic contribution of \$111.4 million in output, \$45.3 million in earnings and 770 jobs. It generated an estimated \$4.8 million in state and local taxes and \$10.2 million in federal taxes.

As points of reference, in 2016, Franklin County had an annual employment of 11,000 and total annual wages of \$359.2 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|------------|---------------------|
| Hospitals | \$80,456,000 | 530 | \$36,924,000 |
| Capital Expenditures | \$1,802,000 | 10 | \$500,000 |
| Direct Contribution | \$82,258,000 | 540 | \$37,424,000 |
| Indirect Contribution | \$11,845,000 | 90 | \$2,991,000 |
| Induced Contribution | \$17,274,000 | 140 | \$4,911,000 |
| Total Contribution | \$111,377,000 | 770 | \$45,326,000 |
| Multiplier | 1.4 | 1.4 | 1.2 |
| State Taxes | \$4,771,000 | - | - |
| Federal Taxes | \$10,204,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY ELAINE JOHNSON

Hancock County

Hancock County is home to three hospitals: Blue Hill Memorial Hospital, Maine Coast Memorial Hospital and Mount Desert Island Hospital. Collectively, these hospitals spent \$183.6 million in the Maine economy in 2016. The hospitals employed 1,250 people and paid \$81.6 million in wages and benefits. An additional 20 jobs and \$1.3 million in wages resulted from their capital expenditures. This spending circulated through Hancock County, resulting in a total economic contribution of \$253.2 million in output, \$101 million in earnings and 1,850 jobs. It generated an estimated \$10.9 million in state and local taxes and \$23.2 million in federal taxes.

As points of reference, in 2016, Hancock County had an annual employment of 22,000 and total annual wages of \$819.7 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|--------------|----------------------|
| Hospitals | \$179,114,000 | 1,250 | \$81,625,000 |
| Capital Expenditures | \$4,518,000 | 20 | \$1,300,000 |
| Direct Contribution | \$183,632,000 | 1,270 | \$82,925,000 |
| Indirect Contribution | \$25,708,000 | 210 | \$6,204,000 |
| Induced Contribution | \$43,888,000 | 370 | \$11,917,000 |
| Total Contribution | \$253,228,000 | 1,850 | \$101,046,000 |
| Multiplier | 1.4 | 1.5 | 1.2 |
| State Taxes | \$10,874,000 | - | - |
| Federal Taxes | \$23,181,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research

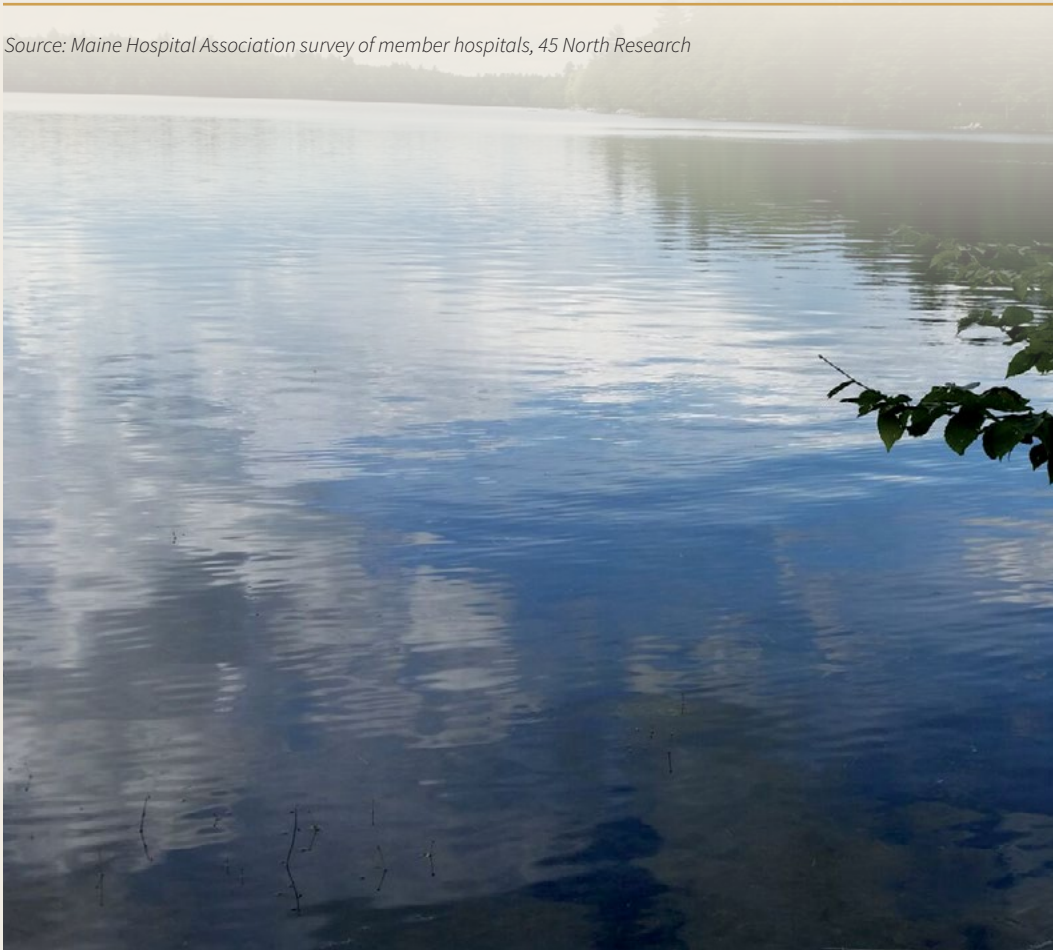


PHOTO BY MARTHA G. HOLDEN

Kennebec County

Kennebec County is home to two hospitals: Inland Hospital and MaineGeneral Medical Center. Collectively, these hospitals spent \$546.7 million in the Maine economy in 2016. The hospitals employed 3,230 people and paid \$226.5 million in wages and benefits. An additional 90 jobs and \$5.2 million in wages resulted from their capital expenditures. This spending circulated through Kennebec County, resulting in a total economic contribution of \$847.4 million in output, \$304.1 million in earnings and 5,580 jobs. It generated an estimated \$36.5 million in state and local taxes and \$77.4 million in federal taxes.

As points of reference, in 2016, Kennebec County had an annual employment of 60,000 and total annual wages of \$2.4 billion (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|--------------|----------------------|
| Hospitals | \$528,656,000 | 3,230 | \$226,485,000 |
| Capital Expenditures | \$18,034,000 | 90 | \$5,150,000 |
| Direct Contribution | \$546,690,000 | 3,320 | \$231,635,000 |
| Indirect Contribution | \$109,338,000 | 810 | \$22,649,000 |
| Induced Contribution | \$191,342,000 | 1,450 | \$49,827,000 |
| Total Contribution | \$847,370,000 | 5,580 | \$304,111,000 |
| Multiplier | 1.6 | 1.7 | 1.3 |
| State Taxes | \$36,506,000 | - | - |
| Federal Taxes | \$77,419,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY BECKY SCHNUR

Knox County

Knox County is home to one hospital: Pen Bay Medical Center. In 2016, Pen Bay Medical Center spent \$130.9 million in the Maine economy. The hospital employed 830 people and paid \$57.5 million in wages and benefits. An additional 30 jobs and \$1.5 million in wages resulted from their capital expenditures. This spending circulated through Knox County, resulting in a total economic contribution of \$198.1 million in output, \$77.2 million in earnings and 1,380 jobs. It generated an estimated \$8.5 million in state and local taxes and \$18.1 million in federal taxes.

As points of reference, in 2016, Knox County had an annual employment of 18,000 and total annual wages of \$651.6 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|--------------|---------------------|
| Hospitals | \$125,653,000 | 830 | \$57,543,000 |
| Capital Expenditures | \$5,200,000 | 30 | \$1,500,000 |
| Direct Contribution | \$130,853,000 | 860 | \$59,043,000 |
| Indirect Contribution | \$32,975,000 | 270 | \$8,401,000 |
| Induced Contribution | \$34,283,000 | 250 | \$9,725,000 |
| Total Contribution | \$198,111,000 | 1,380 | \$77,169,000 |
| Multiplier | 1.5 | 1.6 | 1.3 |
| State Taxes | \$8,544,000 | - | - |
| Federal Taxes | \$18,079,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY BECKY SCHNUR

Lincoln County

Lincoln County is home to one hospital: LincolnHealth. In 2016, LincolnHealth spent \$70.8 million in the Maine economy. The hospital employed 450 people and paid \$34 million in wages and benefits. An additional 20 jobs and \$0.9 million in wages resulted from their capital expenditures. This spending circulated through Lincoln County, resulting in a total economic contribution of \$102.1 million in output, \$45.9 million in earnings and 670 jobs. It generated an estimated \$4.4 million in state and local taxes and \$9.3 million in federal taxes.

As points of reference, in 2016, Lincoln County had an annual employment of 11,000 and total annual wages of \$383.5 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|------------|---------------------|
| Hospitals | \$67,847,000 | 450 | \$33,998,000 |
| Capital Expenditures | \$3,000,000 | 20 | \$900,000 |
| Direct Contribution | \$70,847,000 | 470 | \$34,898,000 |
| Indirect Contribution | \$13,886,000 | 90 | \$5,032,000 |
| Induced Contribution | \$17,357,000 | 110 | \$6,018,000 |
| Total Contribution | \$102,090,000 | 670 | \$45,948,000 |
| Multiplier | 1.4 | 1.4 | 1.3 |
| State Taxes | \$4,438,000 | - | - |
| Federal Taxes | \$9,317,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY MARTHA G. HOLDEN

Oxford County

Oxford County is home to two hospitals: Rumford Hospital and Stephens Memorial Hospital. Collectively, these hospitals spent \$109.9 million in the Maine economy in 2016. The hospitals employed 700 people and paid \$47.3 million in wages and benefits. An additional 20 jobs and \$1 million in wages resulted from their capital expenditures. This spending circulated through Oxford County, resulting in a total economic contribution of \$156.8 million in output, \$61.5 million in earnings and 1,060 jobs. It generated an estimated \$6.8 million in state and local taxes and \$14.3 million in federal taxes.

As points of reference, in 2016, Oxford County had an annual employment of 17,000 and total annual wages of \$588.8 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|--------------|---------------------|
| Hospitals | \$106,203,000 | 700 | \$47,296,000 |
| Capital Expenditures | \$3,649,000 | 20 | \$1,000,000 |
| Direct Contribution | \$109,852,000 | 720 | \$48,296,000 |
| Indirect Contribution | \$18,785,000 | 130 | \$5,155,000 |
| Induced Contribution | \$28,122,000 | 210 | \$8,040,000 |
| Total Contribution | \$156,759,000 | 1,060 | \$61,491,000 |
| Multiplier | 1.4 | 1.5 | 1.3 |
| State Taxes | \$6,769,000 | - | - |
| Federal Taxes | \$14,308,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY BECKY SCHNUR

Penobscot County

Penobscot County is home to five hospitals: Acadia Hospital, Eastern Maine Medical Center, Millinocket Regional Hospital, Penobscot Valley Hospital and St. Joseph Hospital. Collectively, these hospitals spent \$1 billion in the Maine economy in 2016. The hospitals employed 5,220 people and paid \$410.9 million in wages and benefits. An additional 290 jobs and \$17.3 million in wages resulted from their capital expenditures. This spending circulated through Penobscot County, resulting in a total economic contribution of \$1.7 billion in output, \$572 million in earnings and 9,480 jobs. It generated an estimated \$71.1 million in state and local taxes and \$151 million in federal taxes.

As points of reference, in 2016, Penobscot County had an annual employment of 69,000 and total annual wages of \$2.7 billion (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|------------------------|--------------|----------------------|
| Hospitals | \$985,233,000 | 5,220 | \$410,920,000 |
| Capital Expenditures | \$60,172,000 | 290 | \$17,300,000 |
| Direct Contribution | \$1,045,405,000 | 5,510 | \$428,220,000 |
| Indirect Contribution | \$209,081,000 | 1,410 | \$49,310,000 |
| Induced Contribution | \$397,254,000 | 2,560 | \$94,512,000 |
| Total Contribution | \$1,651,740,000 | 9,480 | \$572,042,000 |
| Multiplier | 1.6 | 1.7 | 1.3 |
| State Taxes | \$71,125,000 | - | - |
| Federal Taxes | \$150,957,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY ERNIE REISMAN

Piscataquis County

Piscataquis County is home to two hospitals: C.A. Dean Memorial Hospital and Mayo Regional Hospital. Collectively, these hospitals spent \$69.1 million in the Maine economy in 2016. The hospitals employed 510 people and paid \$33.4 million in wages and benefits. An additional 10 jobs and \$0.6 million in wages resulted from their capital expenditures. This spending circulated through Piscataquis County, resulting in a total economic contribution of \$80.9 million in output, \$37.8 million in earnings and 610 jobs. It generated an estimated \$3.4 million in state and local taxes and \$7.4 million in federal taxes.

As points of reference, in 2016, Piscataquis County had an annual employment of 6,000 and total annual wages of \$178.1 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|---------------------|------------|---------------------|
| Hospitals | \$67,245,000 | 510 | \$33,422,000 |
| Capital Expenditures | \$1,864,000 | 10 | \$600,000 |
| Direct Contribution | \$69,109,000 | 520 | \$34,022,000 |
| Indirect Contribution | \$5,874,000 | 40 | \$2,106,000 |
| Induced Contribution | \$5,943,000 | 50 | \$1,711,000 |
| Total Contribution | \$80,926,000 | 610 | \$37,839,000 |
| Multiplier | 1.2 | 1.2 | 1.1 |
| State Taxes | \$3,440,000 | - | - |
| Federal Taxes | \$7,431,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research

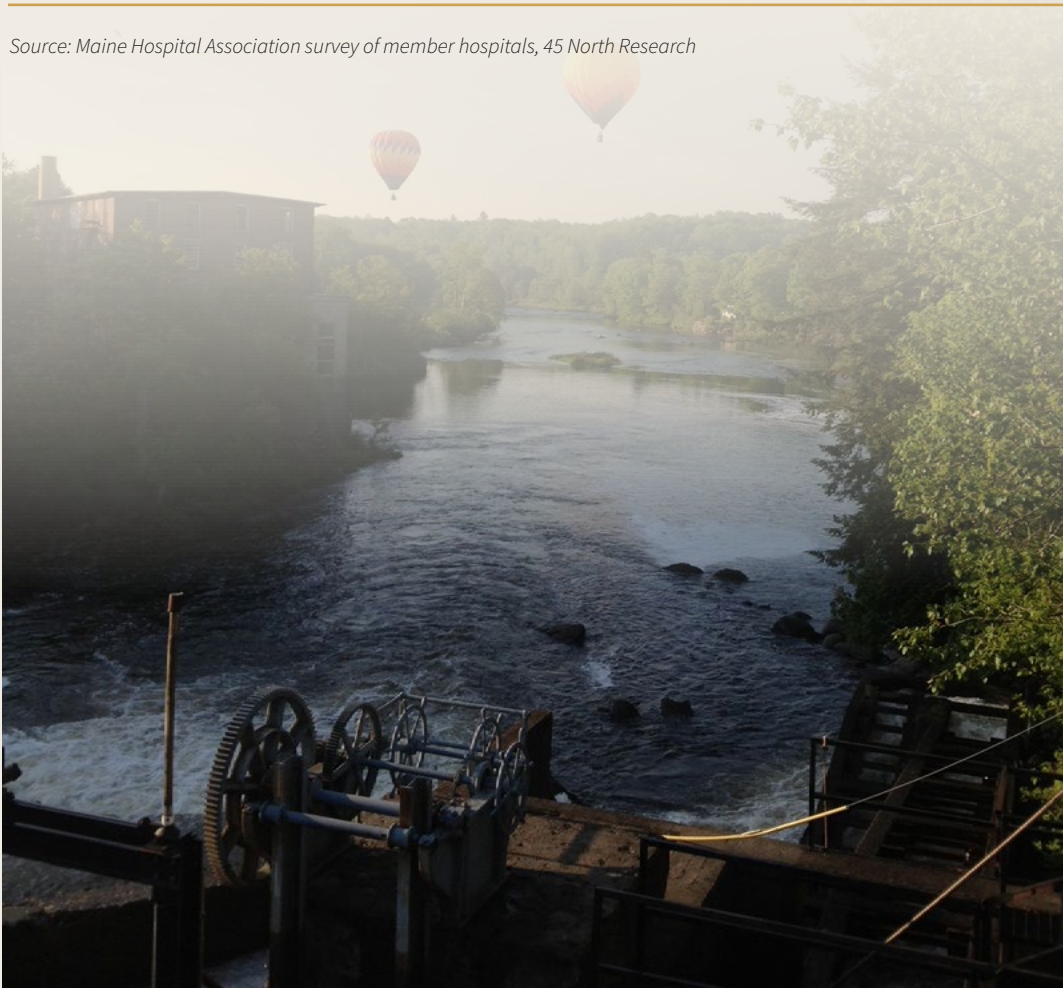


PHOTO BY DAVE MCDERMOTT

Somerset County

Somerset County is home to two hospitals: Redington-Fairview General Hospital and Sebecook Valley Health. Collectively, these hospitals spent \$130.4 million in the Maine economy in 2016. The hospitals employed 860 people and paid \$56.6 million in wages and benefits. An additional 30 jobs and \$1.8 million in wages resulted from their capital expenditures. This spending circulated through Somerset County, resulting in a total economic contribution of \$155.7 million in output, \$64.5 million in earnings and 1,070 jobs. It generated an estimated \$6.7 million in state and local taxes and \$14.2 million in federal taxes.

As points of reference, in 2016, Somerset County had an annual employment of 17,000 and total annual wages of \$660.2 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|--------------|---------------------|
| Hospitals | \$124,549,000 | 860 | \$56,621,000 |
| Capital Expenditures | \$5,887,000 | 30 | \$1,800,000 |
| Direct Contribution | \$130,436,000 | 890 | \$58,421,000 |
| Indirect Contribution | \$9,000,000 | 70 | \$2,548,999 |
| Induced Contribution | \$16,305,000 | 110 | \$3,567,000 |
| Total Contribution | \$155,741,000 | 1,070 | \$64,536,999 |
| Multiplier | 1.2 | 1.2 | 1.1 |
| State Taxes | \$6,658,000 | - | - |
| Federal Taxes | \$14,197,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY DALENDIA ESTES

Waldo County

Waldo County is home to one hospital: Waldo County General Hospital. In 2016, Waldo County General Hospital spent \$89.5 million in the Maine economy. The hospital employed 530 people and paid \$41.3 million in wages and benefits. An additional 20 jobs and \$1.2 million in wages resulted from their capital expenditures. This spending circulated through Waldo County, resulting in a total economic contribution of \$135.1 million in output, \$55.7 million in earnings and 790 jobs. It generated an estimated \$5.8 million in state and local taxes and \$12.3 million in federal taxes.

As points of reference, in 2016, Waldo County had an annual employment of 11,000 and total annual wages of \$421.8 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|------------|---------------------|
| Hospitals | \$85,212,000 | 530 | \$41,261,000 |
| Capital Expenditures | \$4,280,000 | 20 | \$1,200,000 |
| Direct Contribution | \$89,492,000 | 550 | \$42,461,000 |
| Indirect Contribution | \$22,373,000 | 100 | \$6,189,000 |
| Induced Contribution | \$23,268,000 | 140 | \$7,014,000 |
| Total Contribution | \$135,133,000 | 790 | \$55,664,000 |
| Multiplier | 1.5 | 1.4 | 1.3 |
| State Taxes | \$5,770,000 | - | - |
| Federal Taxes | \$12,312,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY BECKY SCHNUR

Washington County

Washington County is home to two hospitals: Calais Regional Hospital and Down East Community Hospital. Collectively, these hospitals spent \$76.0 million in the Maine economy in 2016. The hospitals employed 430 people and paid \$32.2 million in wages and benefits. An additional 10 jobs and \$0.3 million in wages resulted from their capital expenditures. This spending circulated through Washington County, resulting in a total economic contribution of \$105.9 million in output, \$40.2 million in earnings and 650 jobs. It generated an estimated \$4.5 million in state and local taxes and \$9.7 million in federal taxes.

As points of reference, in 2016, Washington County had an annual employment of 10,000 and total annual wages of \$357.3 million (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|------------|---------------------|
| Hospitals | \$75,008,000 | 430 | \$32,242,000 |
| Capital Expenditures | \$1,005,000 | 10 | \$275,000 |
| Direct Contribution | \$76,013,000 | 440 | \$32,517,000 |
| Indirect Contribution | \$12,162,000 | 80 | \$2,966,000 |
| Induced Contribution | \$17,711,000 | 130 | \$4,707,000 |
| Total Contribution | \$105,886,000 | 650 | \$40,190,000 |
| Multiplier | 1.4 | 1.5 | 1.2 |
| State Taxes | \$4,549,000 | - | - |
| Federal Taxes | \$9,650,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research

PHOTO BY LAURIE STONE



York County

York County is home to two hospitals: Southern Maine Health Care and York Hospital. Collectively, these hospitals spent \$445.9 million in the Maine economy in 2016. The hospitals employed 2,600 people and paid \$200.9 million in wages and benefits. An additional 80 jobs and \$4.8 million in wages resulted from their capital expenditures. This spending circulated through York County, resulting in a total economic contribution of \$673.4 million in output, \$270 million in earnings and 4,300 jobs. It generated an estimated \$29 million in state and local taxes and \$61.5 million in federal taxes.

As points of reference, in 2016, York County had an annual employment of 71,000 and total annual wages of \$3.0 billion (see Appendix D).

| | Spending | Jobs (FTE) | Income |
|----------------------------|----------------------|--------------|----------------------|
| Hospitals | \$428,939,000 | 2,600 | \$200,945,000 |
| Capital Expenditures | \$17,005,000 | 80 | \$4,800,000 |
| Direct Contribution | \$445,944,000 | 2,680 | \$205,745,000 |
| Indirect Contribution | \$111,486,000 | 840 | \$30,142,000 |
| Induced Contribution | \$115,945,000 | 780 | \$34,161,000 |
| Total Contribution | \$673,375,000 | 4,300 | \$270,048,000 |
| Multiplier | 1.5 | 1.6 | 1.3 |
| State Taxes | \$28,961,000 | - | - |
| Federal Taxes | \$61,525,000 | - | - |

Source: Maine Hospital Association survey of member hospitals, 45 North Research



PHOTO BY BOB DENNIS

Appendix A: Methodology

The preceding analysis quantifies the economic contribution of Maine hospitals based on data gathered by MHA and 45 North Research. An industry’s “economic contribution” is defined as the gross change in economic activity within a region that can be attributed to that industry.

Data

MHA collected information from its 36 member hospitals regarding operational expenses, including payroll and employment.⁷ 45 North gathered additional data from each hospital through an online survey that focused on capital expenditures, food, and fuel. To account for year-to-year fluctuations in capital spending, capital expenditures were averaged over three years. This allowed 45 North to estimate the annual operational and capital expenditures of Maine hospitals.

Economic Model

The economic contribution of Maine hospitals reaches far beyond their direct expenditures. Their spending, and that of their employees, ripples through the economy, supporting businesses and residents throughout the state.

To quantify those effects, IMPLAN, a well-regarded, proprietary input-output modeling program, was used. Within IMPLAN’s data files are sales, employment and income data for each sector of Maine’s economy. IMPLAN also contains mathematical representations of the purchases that take place between those sectors. With those tools, IMPLAN estimates how spending by one sector affects other sectors. There are two categories of “ripple effects” – indirect and induced – described

below. Hospitals’ direct contribution is the input to the IMPLAN model; the indirect and induced contributions are the output.

Direct Contribution

Hospitals’ direct expenditures (payments to employees and vendors, purchases of equipment and supplies, etc.) are their direct contribution to Maine’s economy. This also includes economic activity associated with hospitals’ capital expenditures. This spending is the input to the IMPLAN model. It is the economic activity that causes the ripples.

Indirect Contribution

Hospital spending becomes revenue to other businesses such as food distributors, oil dealers, landscapers, and more. Those businesses in turn spend money on their own supplies and vendors. These supply-chain links generate hospitals’ indirect contribution to Maine’s economy.

Induced Contribution

In addition to business-to-business relationships, a substantial portion of hospital spending becomes household earnings. Employees of hospitals and the businesses they support earn income with which to purchase household goods and services ranging from furniture and cell phones to haircuts and restaurant meals. These consumer-spending links generate hospitals’ induced contribution to the economy.

Total Contribution

The sum of hospitals’ direct, indirect, and induced contributions equals their total contribution to Maine’s economy. This represents the gross change in economic activity in Maine attributable to hospitals.

⁷ These 36 institutions constitute nearly all of Maine’s hospital industry. The only hospitals not included are state and federally run (e.g. Dorothea Dix, Riverview and Togus).

Multipliers

Multipliers describe the size of the ripple effects that spending by a particular industry or group of businesses has on an economy. They vary depending on the nature of the goods being purchased and the availability of local suppliers. For example, some hospitals can purchase supplies locally, while others must import them from outside their region. Some can use local contractors and vendors while others (often those in remote locations) must hire across long distances. Mathematically, multipliers are the ratio of the direct and total contributions. If an industry's direct contribution is \$1 million and its total contribution is \$1.5 million, then its multiplier is 1.5.

Regional Analysis

Lawton and 45 North calculated the statewide economic contribution of all Maine hospitals and the regional contributions of the hospitals in each county. To do that, they created separate economic models for the MHA member hospitals in each county. Appendix B lists the hospitals in this report by the county they reside in, and Appendix C contains a detailed table of expenditures and economic contributions by county. Note that the regional models assumes multiplier effects only for spending and wages that remain within each county. Some of this “leakage” is captured by the statewide model, which calculates multiplier effects for all spending and wages that remain within the state. **Therefore, it is not appropriate to sum the results of the regional models to derive a statewide total.** The sum of the results of the regional models will always be less than the results of the statewide model.

Appendix B: MHA Member Hospitals

| | |
|--------------|---|
| Androscoggin | Central Maine Medical Center St. Mary's Regional Medical Center |
| Aroostook | Cary Medical Center Houlton Regional Hospital Northern Maine Medical Center The Aroostook Medical Center |
| Cumberland | Bridgton Hospital Maine Behavioral Healthcare /Spring Harbor Hospital Maine Medical Center Mercy Hospital Mid Coast Hospital New England Rehabilitation Hospital of Portland |
| Franklin | Franklin Memorial Hospital |
| Hancock | Blue Hill Memorial Hospital Maine Coast Memorial Hospital Mount Desert Island Hospital |
| Kennebec | Inland Hospital MaineGeneral Medical Center |
| Knox | Pen Bay Medical Center |
| Lincoln | LincolnHealth |
| Oxford | Rumford Hospital Stephens Memorial Hospital |
| Penobscot | Acadia Hospital Eastern Maine Medical Center Millinocket Regional Hospital Penobscot Valley Hospital St. Joseph Hospital |
| Piscataquis | C.A. Dean Memorial Hospital Mayo Regional Hospital |
| Somerset | Redington-Fairview General Hospital Sebasticook Valley Health |
| Waldo | Waldo County General Hospital |
| Washington | Calais Regional Hospital Down East Community Hospital |
| York | Southern Maine Health Care York Hospital |

Appendix C: Employment and Expenditure Data

| Operating Expenses | | | | | | |
|--------------------|--------|-------------|-------------|----------|----------|-------------|
| | Jobs | Total \$ | Payroll | Food | Fuel | Other |
| Maine | 32,870 | \$5,495,770 | \$2,501,428 | \$24,079 | \$28,976 | \$2,941,287 |
| Androscoggin | 3,110 | \$562,452 | \$257,820 | \$2,644 | \$4,485 | \$297,502 |
| Aroostook | 1,900 | \$266,043 | \$124,648 | \$1,839 | \$2,047 | \$137,508 |
| Cumberland | 10,740 | \$1,813,160 | \$859,677 | \$6,163 | \$7,637 | \$939,683 |
| Franklin | 530 | \$80,456 | \$36,924 | \$319 | \$326 | \$42,887 |
| Hancock | 1,250 | \$179,114 | \$81,625 | \$669 | \$834 | \$95,985 |
| Kennebec | 3,230 | \$528,656 | \$226,485 | \$2,711 | \$2,708 | \$296,752 |
| Knox | 830 | \$125,653 | \$57,543 | \$621 | \$429 | \$67,059 |
| Lincoln | 450 | \$67,847 | \$33,998 | \$1,259 | \$346 | \$32,243 |
| Oxford | 700 | \$106,203 | \$47,296 | \$246 | \$225 | \$58,437 |
| Penobscot | 5,220 | \$985,233 | \$410,920 | \$4,234 | \$5,011 | \$565,068 |
| Piscataquis | 510 | \$67,245 | \$33,422 | \$200 | \$365 | \$33,258 |
| Somerset | 860 | \$124,549 | \$56,621 | \$740 | \$1,319 | \$65,870 |
| Waldo | 530 | \$85,212 | \$41,261 | \$422 | \$248 | \$43,282 |
| Washington | 430 | \$75,008 | \$32,242 | \$170 | \$318 | \$42,278 |
| York | 2,600 | \$428,939 | \$200,945 | \$1,842 | \$2,678 | \$223,474 |

| Capital Expenditures | | | | | | |
|----------------------|-------|-----------|-----------|-----------|----------|----------|
| | Jobs | Total \$ | Buildings | Equipment | Vehicles | Other |
| Maine | 1,100 | \$231,785 | \$78,288 | \$141,373 | \$1,200 | \$10,923 |
| Androscoggin | 100 | \$21,408 | \$4,469 | \$16,423 | \$82 | \$435 |
| Aroostook | 80 | \$16,899 | \$6,602 | \$8,790 | \$60 | \$1,447 |
| Cumberland | 320 | \$67,063 | \$21,063 | \$44,745 | \$140 | \$1,115 |
| Franklin | 10 | \$1,802 | \$619 | \$929 | \$150 | \$104 |
| Hancock | 20 | \$4,518 | \$1,697 | \$2,051 | \$45 | \$725 |
| Kennebec | 90 | \$18,034 | \$3,905 | \$8,629 | \$100 | \$5,400 |
| Knox | 30 | \$5,200 | \$2,000 | \$3,000 | \$100 | \$100 |
| Lincoln | 20 | \$3,000 | \$1,000 | \$1,500 | \$100 | \$400 |
| Oxford | 20 | \$3,649 | \$828 | \$2,539 | \$210 | \$72 |
| Penobscot | 290 | \$60,172 | \$24,367 | \$35,366 | \$50 | \$389 |
| Piscataquis | 10 | \$1,864 | \$221 | \$1,442 | \$0 | \$200 |
| Somerset | 30 | \$5,887 | \$3,530 | \$2,256 | \$101 | \$0 |
| Waldo | 20 | \$4,280 | \$428 | \$3,843 | \$0 | \$8 |
| Washington | 10 | \$1,005 | \$31 | \$958 | \$7 | \$10 |
| York | 80 | \$17,005 | \$7,528 | \$8,902 | \$56 | \$519 |

Source: Maine Hospital Association survey of member hospitals, 45 North Research
Data for FY 2016; October 1, 2015 – September 30, 2016
All dollar values are in thousands.

Appendix D: 2016 Total County Employment and Wage Data

| | Annual Establishments | Average Annual Employment | Total Wages |
|--------------|-----------------------|---------------------------|------------------|
| Maine | 52,931 | 603,785 | \$25,718,853,069 |
| Androscoggin | 3,121 | 49,348 | \$1,974,761,578 |
| Aroostook | 2,565 | 27,206 | \$969,785,517 |
| Cumberland | 13,777 | 178,895 | \$8,734,641,272 |
| Franklin | 956 | 10,566 | \$359,228,521 |
| Hancock | 2,622 | 22,231 | \$819,673,900 |
| Kennebec | 3,922 | 59,902 | \$2,421,829,490 |
| Knox | 2,028 | 17,639 | \$651,630,817 |
| Lincoln | 1,600 | 11,177 | \$383,458,199 |
| Oxford | 1,573 | 16,672 | \$588,842,745 |
| Penobscot | 4,792 | 69,443 | \$2,739,157,789 |
| Piscataquis | 564 | 5,572 | \$178,076,066 |
| Somerset | 1,439 | 16,883 | \$660,180,364 |
| Waldo | 1,226 | 11,412 | \$421,808,604 |
| Washington | 1,169 | 10,285 | \$357,334,557 |
| York | 6,808 | 70,628 | \$2,985,964,145 |

Source: U.S. Department of Labor Quarterly Census of Employment Wages, 2016



PHOTO BY BECKY SCHNUR



Maine Hospital Association

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