

## Economic Impacts of Physicians on Mississippi's County Economies

While the local community benefits from the increase in availability of healthcare when a physician locates in a particular area, the community also benefits from an increase in economic activity generated by the new business. The purpose of this study is to estimate the economic impact that a single physician has on a local county's economy.

The economic gains from the location of a physician in a particular county will depend upon the healthcare infrastructure existing in that county. Using a computer model called IMPLAN, a model was constructed detailing the existing infrastructure in each county in Mississippi.<sup>1</sup> Following previous studies,<sup>2</sup> we assumed that physicians, as a whole, were responsible for 100% of the economic activity at hospitals, 50% at nursing homes, and 50% of the economic activity at pharmacies; models which employ different assumptions will result in different outcomes. In addition, we assumed that each physician's office employs the following workforce,<sup>3</sup>

1 physician @ \$171,249  
0.75 RN @ \$50,130  
0.5 LPN @ \$30,700  
1.0 Medical Secretary @ \$26,080  
0.25 Medical Assistant @ \$22,630  
0.25 Technician @ \$29,430

Based on the above assumptions and given each county's infrastructure, the economic impact generated by physicians on employment in a county, employment compensation flowing to county residents, and each county's economic output can be estimated.

The initial flow of dollars resulting from economic activity generated by a physician affects the local economy directly. Examples of direct effects would be the purchase of prescribed pharmaceuticals and other health-related items from local retailers or the purchase of

The increase in output (the value of final goods and services produced) in the county economies resulting from an individual physician practice averaged \$2.05 million, but ranged from \$14.24 million in Lamar County to \$120,000 in Tunica County.

<sup>1</sup> 2000 was used as the base year for the determination of economic infrastructure and trade flows within a county.

<sup>2</sup> E.g., see "Twenty-Five+ Years", a report from the Center for Health Policy Research, October 2001. <http://www.pmtc.state.ok.us/pmtcstudy.pdf>

<sup>3</sup> Salaries are reported in 2006 dollars.

**Figure 1: Estimated County Economic Impacts Attributable to an Individual Physician**

County	Employment Impact (jobs)	Employment Compensation Impact (millions 2008\$)	Output Impact (millions 2008\$)	County	Employment Impact (jobs)	Employment Compensation Impact (millions 2008\$)	Output Impact (millions 2008\$)
Adams	17	0.71	0.89	Leflore	12	0.50	0.22
Alcorn	12	0.56	0.87	Lincoln	40	1.18	2.40
Amite	10	0.44	0.18	Lowndes	34	1.28	2.18
Attala	30	0.91	1.92	Madison	15	0.65	1.26
Benton	28	0.69	0.73	Marion	20	0.73	1.36
Bolivar	26	0.91	1.60	Marshall	18	0.72	0.87
Calhoun	11	0.54	1.53	Monroe	34	1.32	2.50
Carroll*	--	--	--	Montgomery	16	0.58	1.41
Chickasaw	53	1.67	3.95	Neshoba	12	0.54	0.76
Choctaw	52	2.04	3.81	Newton	42	1.37	2.64
Claiborne	17	0.62	0.49	Noxubee*	--	--	--
Clarke	47	1.48	2.64	Oktibbeha	15	0.60	0.54
Clay	39	1.42	2.76	Panola	14	0.62	0.80
Coahoma	35	1.27	2.35	Pearl River	33	1.22	2.66
Copiah	13	0.58	1.14	Perry	8	0.48	1.20
Covington	28	0.88	1.87	Pike	16	0.57	0.45
DeSoto	30	1.20	2.67	Pontotoc	65	2.07	5.15
Forrest	11	0.49	0.34	Prentiss	33	1.15	2.40
Franklin	36	1.02	2.79	Quitman	104	2.79	6.53
George	11	0.50	0.64	Rankin	26	1.01	1.65
Greene	59	1.24	3.47	Scott	55	1.63	4.17
Grenada	15	0.57	0.77	Sharkey	13	0.48	0.25
Hancock	10	0.52	0.51	Simpson	119	2.96	7.44
Harrison	20	0.87	1.12	Smith	41	1.19	2.48
Hinds	23	0.95	1.23	Stone	25	0.86	1.57
Holmes	26	1.00	1.85	Sunflower	14	0.59	0.77
Humphreys	15	0.53	1.41	Tallahatchie	10	0.58	1.47
Issaquena**	--	--	--	Tate	24	1.00	1.83
Itawamba	28	0.90	1.71	Tippah	25	0.87	1.71
Jackson	10	0.46	0.42	Tishomingo	41	1.43	3.07
Jasper*	--	--	--	Tunica	7	0.37	0.12
Jefferson*	--	--	--	Union	38	1.33	2.68
Jefferson Davis	10	0.54	1.55	Walthall	17	0.58	0.85
Jones	11	0.46	0.15	Warren	44	1.70	2.90
Kemper	58	1.47	2.41	Washington	19	0.75	0.99
Lafayette	40	1.36	2.27	Wayne	17	0.62	1.21
Lamar	165	5.53	14.24	Webster	61	1.72	4.03
Lauderdale	40	1.53	2.63	Wilkinson	15	0.59	0.86
Lawrence	22	0.74	1.83	Winston	38	1.22	2.76
Leake	29	1.06	1.84	Yalobusha	11	0.55	1.76
Lee	46	1.69	3.16	Yazoo	31	1.11	2.21

\*Insufficient healthcare infrastructure in county.

\*\*No current physician in county upon which to base results.

hospital services designated by the physician such as CAT Scans or MRIs. As these local healthcare related sectors expand more intermediate goods and services will be purchased from other local businesses; this is called the *indirect economic* effect of the initial spending. As economic transactions between businesses increase, more workers are employed, which results in greater household incomes. As households spend their additional income within the county, it sets off another chain reaction of activity called the *induced effect*. The sum of the direct, indirect, and induced effects provides the total impact on the local economy associated with one physician. The total estimated impact of one physician in each county is presented in Figure 1.

The increase in output (the value of final goods and services produced) in the county economies resulting from an individual physician practice averaged \$2.05 million, but ranged from \$14.24 million in Lamar County to \$120,000 in Tunica County. The increased economic activity associated with a physician's practice supported, on average, 31 jobs in the state's county economies. This ranged from highs of 165, 119, and 104 in Lamar, Simpson, and Quitman counties respectively, to a low of 7 in Tunica County. Increases in employment compensation created by the impact of a physician's practice ranged from \$370,000 in Tunica County to \$5.53 million in Lamar County. Overall, the increase in employment compensation averaged \$1.05 million across all of the county economies.

Due to a lack of existing health care infrastructure, economic impacts could not be calculated for the economies of Carroll, Issaquena, Jasper, Jefferson, and Noxubee.

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