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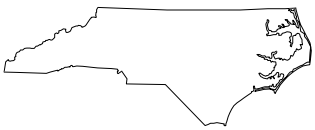

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HEALTH COSTS IN NORTH CAROLINA – County Government Expenditures for Health

by Kathryn B. Surles, M.Ed.

This report is the third in a series devoted to measuring health costs in North Carolina and assessing those changes over time. Preceding briefs have examined hospital costs and charges[1] and health insurance activity and costs.[2] A succeeding brief will examine state government expenditures for health. As soon as data for 1994 and 1995 become available, other briefs will examine estimates of personal health care expenditures by type of provider and expenditures by the Medicare and Medicaid programs. The purpose is to establish indicators for tracking health costs in the future.

This report estimates the cost of health to the 100 county governments of North Carolina. The results may be used to assess the public investment in health in comparison to other budget items, to assess how that investment is changing over time, and ultimately, to study the relationship between public health spending and the public's health.

Explanatory Notes

The data of this report are primarily from the County Annual Financial Information Report (AFIR) for fiscal years 1990 and 1995, as reported by each county government to the Local Government Commission (LGC). The LGC requests that counties report data from their audited financial statements and related schedules, but does not verify the results.

We thank Beth A. Wood, CPA, Department of State Treasurer, for providing the data for this report. The data for individual counties are available from the Department of State Treasurer.

The health department expenditures reported to the LGC have been compared to information from the Contract Data System[3] as a rough means of verification:

	1990	1995
LGC	$195 Million	$311 Million
Contract Data System[3]	200 Million	317 Million

The differences between LGC figures and those from the Contract Data System are relatively small, given that data from the two systems are self-reported.

In another attempt to corroborate the LGC data, the Division of Medical Assistance (DMA) was asked about county Medicaid payments in fiscal years 1990 and 1995. Again, differences between the two systems are relatively small, especially in FY 1995:

	1990	1995
LGC	$61.5 Million	$152.0 Million
DMA[4]	65.5 Million	156.1 Million

In its taxonomy for health, the Office of State Budget and Management includes Medicaid costs under the goal, "Improve Access to Health Care." Thus, county shares of

Medicaid payments are included in county expenditures for health.

Most environmental programs directly or indirectly benefit the public's health, but only those operating through county health departments are included here. This excludes expenditures reported separately to the LGC under "environmental protection," specifically, expenditures for solid waste management and for drainage and watersheds.

Expenditures reported in this brief are from all revenue sources including federal, state, and local intergovernmental revenues, taxes, licenses and permits, sales and services, utility revenues, investment earnings, etc. In FY 1995, about one-fourth of expenditures by county health departments were from state and federal sources.[3]

Current Spending for Health

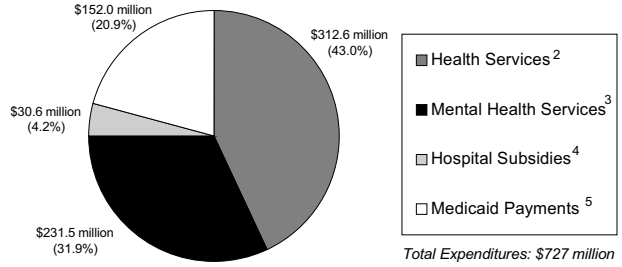
In FY 1995, county governments in North Carolina reported expenditures of $727 million in the four areas depicted in Chart 1. Together, health and mental health services accounted for 75 percent. Most of the remainder was county shares of Medicaid, paid to the state for disbursement.

Changes Since FY 1990

Chart 2 depicts county government health spending in fiscal years 1990 and 1995. The 1995 expenditures are expressed in 1990 dollars, using the consumer price index (urban) as a deflator. The remaining increase between 1990 and 1995 indicates the health spending increase that exceeded the general rate of inflation. This convention has been used by the Center for Health Economics Research.[5]

Compared to the increase for Medicaid (115%), increases for health (39%) and mental health (43%) were moderate.

Chart 1
County Government Expenditures for Health[1]
North Carolina FY 1995



Total Expenditures: $727 million

[1]Excludes construction and purchase of land, equipment, and existing structures. Includes federal and state revenues. Data are from the Local Government Commission as reported on the LGC-36 form. [2]Includes medical examiner/coroner/autopsy payments and all expenditures of the county/district health department. [3]Expenditures of the county/area mental health authority. [4]County and private hospitals. [5]County share paid to the state for disbursement.

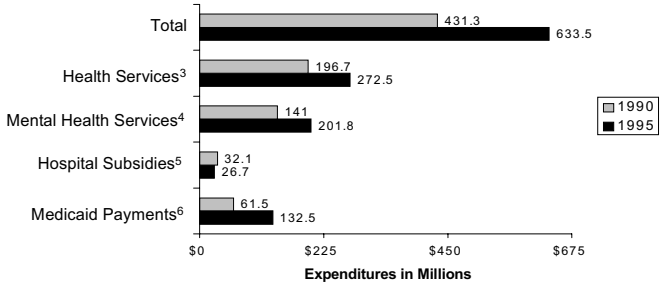
Hospital subsidies were 17 percent lower in FY 1995 than in FY 1990. The overall increase in spending over the 5-year period was 47 percent.

To calculate per capita expenditures, the following population bases apply:

	1990	1995
Total Population	6,648,689	7,194,238
Population Below Poverty	864,330	906,474

The 1990 and 1995 numbers of persons below poverty are based on estimated poverty rates of 13.0 and 12.6 percent respectively. The calculation, "expenditures per person below

Chart 2
County Government Expenditures for Health[1]
(Adjusted for General Inflation[2])
North Carolina FY 1990 and FY 1995



[1]Excludes construction and purchase of land, equipment, and existing structures. Includes federal and state revenues. Data are from the Local Government Commission as reported on the LGC-36 form.
[2]The 1995 expenditures are expressed in 1990 dollars using the general consumer price index (urban) as a deflator. This convention has been used by the Center for Health Economics Research (see reference 4).
[3]Includes medical examiner/coroner/autopsy payments and all expenditures of the county/district health department. [4]Expenditures of the county/area mental health authority. [5]County and private hospitals. [6]Country share paid to the state for disbursement.

poverty," may be especially appropriate in depicting changes in Medicaid.

Local Health Department Expenditures

Since the early 1900s, researchers and government officials have used per capita expenditures to describe local health department spending patterns.[6] Following that approach and using data from the Local Government Commission, the average unadjusted per capita expenditure by local health departments statewide rose 48 percent between 1990 and 1995, from $29 to $43. These figures compare to an estimated national average of $26 per capita during 1992-1993. The national estimate was derived from 2,079 responses to a mail survey of local health departments by the National Association of County and City Health Officials and the Centers for Disease Control and Prevention.[6]

Using multiple linear regression, the national study found that approximately 70 percent of the variability in local health department spending could be explained by the population size of the jurisdiction. After population size, the largest contributors to the variability were number of full-time staff (4%), percentage of funds from Medicare (3%), and number of programs provided by the department (2%). A major finding of the study was the broad range of local health department spending, even for jurisdictions of similar size.[6]

Estimated per capita expenditures were greatest in jurisdictions with 190,000 to 250,000 population. At populations greater than 250,000, per capita expenditures decreased.[6]

In reviewing the literature, the national report cites Emerson (1945), who suggested that effective local health departments would be organized to serve populations of at least 50,000. Wissel (1992) found that departments serving populations of more than 65,800 were more likely to carry out the core public health functions. According to Koplin (1990), jurisdictions of less than 50,000 represent "a major deterrent to efficient functioning of local health agencies." On the other hand, Shonick and Price (1978) reported "no clear-cut connection" between per capita expenditures and population size.[6]

Conclusion

Public health programs vary widely across the state. Some health departments operate animal and vector control programs; others do not. Some have Home Health. About half of counties contribute to WIC. Most counties, but not all, offer family planning services. The array of available mental health services also varies by county. Due to this variation in the scope of services, one county's expenditures may not be directly comparable to another's.

Despite this, we believe it is useful to document the public's investment in health in North Carolina and to develop a system to track the expenditures over time and across agencies and levels of government. As noted earlier, the results may be used to assess the public's investment in health and how that is changing over time. An opportunity may also exist to investigate relationships between public health spending and the public's health.

References

[1]N.C. Department of Environment, Health, and Natural Resources, State Center for Health Statistics. "Health Costs in North Carolina – Recent Changes in Hospital Statistics," *Statistical Brief.* No. 9, July 1997.

[2]N.C. Department of Environment, Health, and Natural Resources, State Center for Health Statistics. "Health Costs in North Carolina – Accounting for Accident and Health Insurance Costs," *Statistical Brief.* No. 10, August 1997.

[3]N.C. Department of Environment, Health, and Natural Resources. Contract Data System, as reported by local health departments, 1990 and 1995.

[4]Personal communication, Kathryn Surles with Gary Shook, Division of Medical Assistance, N.C. Department of Human Resources. Raleigh, October 30, 1996.

[5]Center for Health Economics Research. *The Nation's Health Care Bill: Who Bears the Burden?* Cambridge, Massachusetts, July 1994.

[6]Gordon, Randolph L., Robert B. Gerzoff, and Thomas B. Richards, "Determinants of US Local Health Department Expenditures, 1992 through 1993," *American Journal of Public Health*. Vol. 87, No. 1, January 1997.

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