

Incorporating Measures of County-Level Health Policies and Programs into the Wisconsin County Health Rankings

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Background

- Local public health systems are evaluated on their performance of the core public health functions
- Data on public health system capacities, processes, and outcomes are limited
- The annual *Wisconsin County Health Rankings* measures the health of Wisconsin counties based on health outcomes and health determinants
- A measure of county-level health policies and programs added to the *Rankings* report will increase the usefulness of this tool.

Aims

- Describe available measures of local health department (LHD) capacity.
- Determine the association between these measures and health outcomes and health determinants.

Data

Secondary data: certification level, number of FTE staff per 100,000 population, total LHD funding per capita, and LHD funding per capita from local taxes were obtained from the Wisconsin Department of Health and Family Services Public Health Profiles. County health ranking z-scores were obtained from the 2006 Wisconsin County Health Rankings.

Methods

10-year and 3-year averages were calculated for total LHD funding, local LHD funding, and total FTE staff for the county-level LHDs. Regression coefficients were calculated for the 10-year trends in funding and staffing. Percent of total funding from local taxes was also calculated.

Results

Wisconsin LHDs can be certified at 3 different levels:

- Level 1 departments provide basic public health services
- Level 2 departments provide basic services plus additional services as guided by the state health plan
- Level 3 departments provide a full range of services and are led by a health officer with a higher level of credentials. See Table 1 for the state distribution of levels (county and city health departments are both included).

Table 1. Wisconsin State Capacity Measures: Certification Level

LHD Certification Level	#	%
Level 1	8	8.5
Level 2	59	62.8
Level 3	27	28.7

On average, health department funding from local taxes in each county is roughly half of total funding from all sources. The average number of full time health department staff is roughly 4 per 100,000 population.

From 1995 to 2004, total health department funding increased 56%. However, in constant dollars the increase was only 32%. Furthermore, total funding has leveled off since 2001. According to the 2006 America's Health Rankings, Wisconsin ranked 46th out of 50 states in terms of public health spending.

Three distinct periods emerge in Figure 1:

- Slight increase from 1995-1998
- Sharper increase from 1998-2001
- Slight decline from 2001-2004

LHD funding is higher in counties with worse health outcomes (greater number of years of potential life lost and/or higher percentages of the population reporting fair or poor health).

Table 2. Wisconsin State Capacity Measures: Funding and Staffing

Capacity Measure	Mean (10 yr avg.)	Range (10 yr avg.)	SD (10 yr avg.)	Crude Trend (Reg. Coefficient)	Trend Adjusted for Inflation
Total LHD Funding per Capita (\$)	20.6	7.4 - 68.2	9.8	1.216	0.816
Local LHD Funding per Capita (\$)	10.4	4.0 - 21.2	4.2	0.526	0.328
Total FTE Staff per 100,000 Population	3.9	1.1 - 13.7	2.1	0.093	N/A

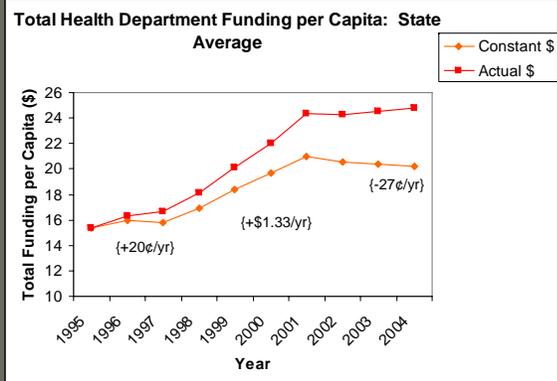


Figure 1: Total local health department funding per capita (in 2004 dollars)—Wisconsin state average

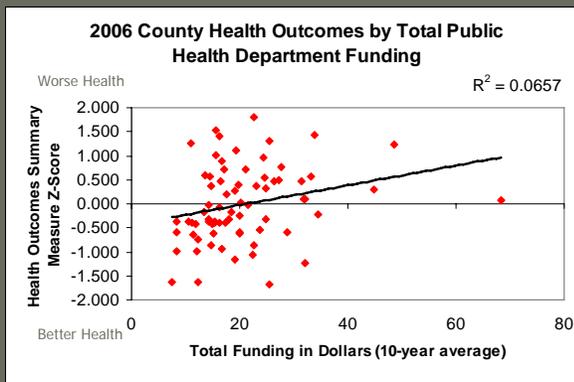


Figure 2: Association of total local public health department funding per capita with the 2006 *Wisconsin County Health Rankings* health outcomes summary measure z-score.

Discussion

Local health departments in counties with poorer health outcomes spend more, perhaps due to greater needs. It is yet to be determined whether increased funding could lead to improved outcomes.

Overall, levels of total health department funding in Wisconsin, already low by U.S. standards, have stagnated in the past 3 years.

Furthermore, while overall funding levels have not increased in recent years, an increased amount of funding since 9/11 has been directed toward emergency preparedness and bioterrorism efforts rather than other public health programs.

Next Steps

Feedback from local health officers about including measures of capacity and other measures of programs and policies in the *County Rankings*. Their survey responses will be analyzed, along with the correlations between local health department capacity measures and *Rankings* z-scores, to guide recommendations for incorporating measures of policies and programs into future reports.

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