Taxing Districts, Expenditures, and Population Health Outcomes

James Studnicki, ScD

University of North Carolina at Charlotte

Irwin Belk Endowed Chair in Health Services Research

Introduction

- Previous Study
 - Data 1992-1996
 - Segmented counties solely by presence of an "active" Health Related Special Taxing District (HRSTD)
 - No financial information available for analysis

Improvements of New Study

- Tracking all health-related tax-funded expenditures in counties
- Organized counties by activity levels of Health Related Special Taxing District (HRSTD)
- Added a focus on impact of HRSTD on outcomes segmented by race
- 2000-2005 data

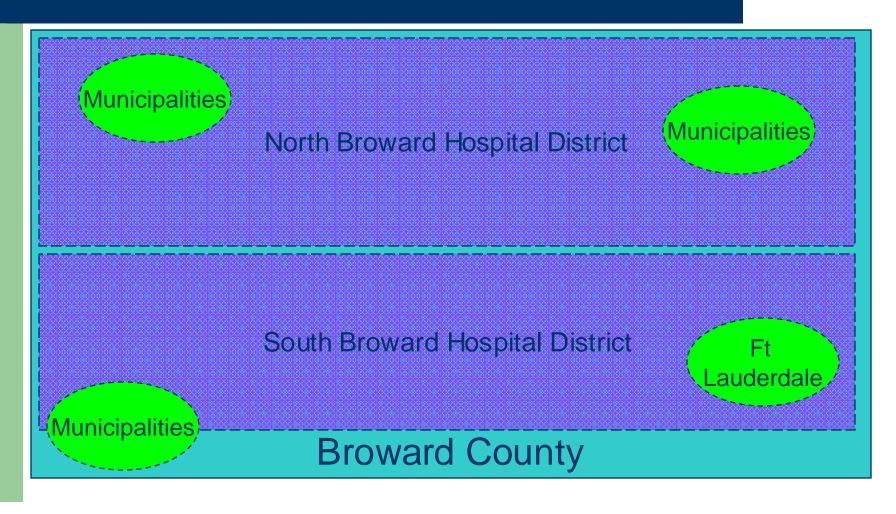
County and Municipality Health Expenditure Accounts

526	Ambulance and Rescue Services
527	Medical Examiners
561	Hospitals (<u>net</u> expenditures)
562	Health
563	Mental Health
31xxxx	Tax Revenues from Health Related Special Taxing Districts

Revenues

331610	Health or Hospitals	Federal Grants
334610	Health or Hospitals	State Grants
335610	Health or Hospitals	State Shared
346200	Hospital Charges	Charges for Services (County and Muni only, to offset Hospital Expenditures)

Independent Accounting Entities



Taxing District Types

- Healthcare/Indigent Care (34/28)
- Hospital/Health Facility (36/30)
- Children's Health Services (9/9)
- Emergency Medical Services (6/6)

Taxing District Tier Definitions

- Tier 1 (10 counties) Multiple District Counties
 - Multiple active (receiving ad valorem tax revenue)
 health related special taxing districts
- Tier 2 (9 counties) Single District Counties
 - Single (usually a hospital district) active health related special taxing district
- Tier 3 (48 counties)— Non-Taxing District Counties
 - No active health-related special taxing districts (either no taxing authority, or districts are not collecting any tax revenue)

Tier Demographic Averages

	Tier 1	Tier 2	Tier 3
Average Population	925,615	89,386	142,813
% Black	13.6	13.2	14.9
% Poverty	11.2	16.6	15.0
% 65 and up	20.4	17.7	16.9
% Hispanic	16.3	13.8	7.0

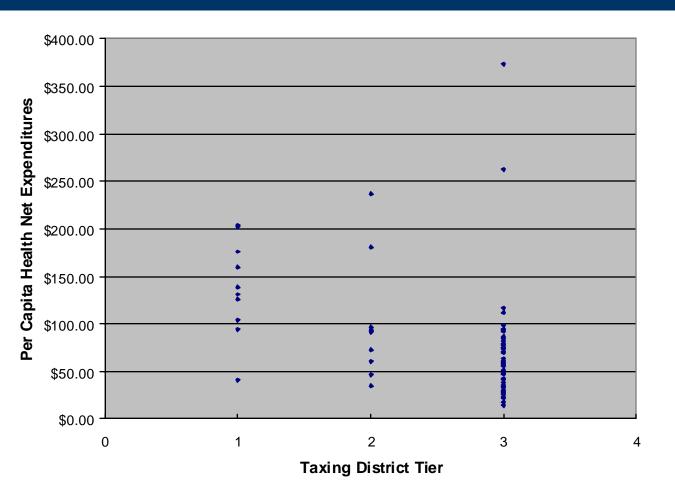
Financial Indicators (County Averages)

	Tier 1 Counties		Tier 2 Counties		Tier 3 Counties	
Total Exp	\$	2,800,192,793	\$	176,364,716	\$	349,029,701
HC Costs	\$	135,959,721	\$	7,117,097	\$	8,742,284
PC Total Exp	\$	2,787	\$	1,775	\$	1,932
PC HC Costs	\$	137	\$	101	\$	70
PPovC Total Exp	\$	25,840	\$	11,488	\$	14,779
PPovC HC Costs	\$	1,288	\$	608	\$	513
Grants	\$	7,286,014	\$	30,441	\$	105,252
PC Grants	\$	5.72	\$	0.60	\$	1.09
PPov Grants	Pov Grants \$ 46.25		\$	2.75	\$	7.10

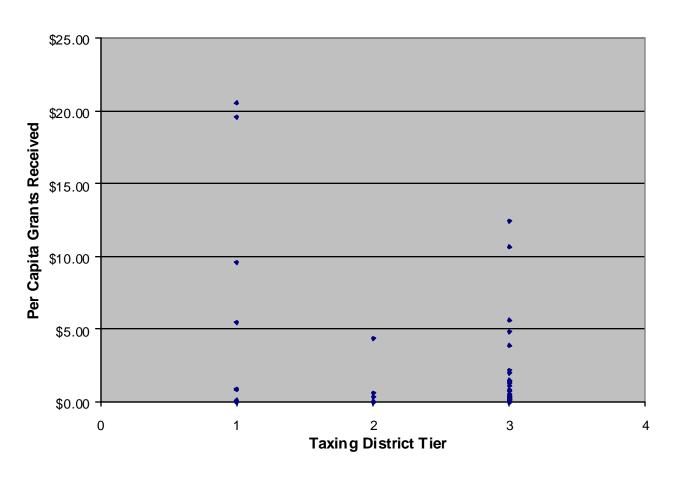
Financial Indicator Mean Values

	Tier 1 Counties	Tier 2 Counties	Tier 3 Counties
% HC/TC	5.01%	6.22%	3.83%
%(HC-G)/(TC-G)	4.81%	6.19%	3.77%
%Grant/HC	3.71%	0.70%	1.71%

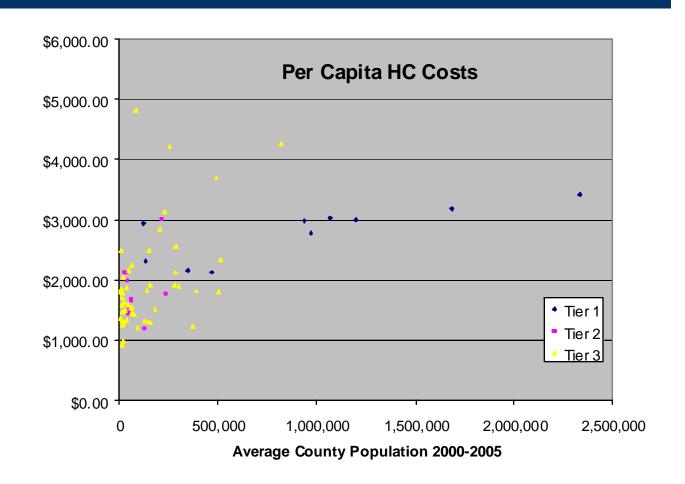
Per Capita Health Expenditures By Tier



County Per Capita Grant \$ By Tier



Distribution of Per Capita Health Expenditures by County Population



Outcomes: County Mean Values

Crude rate - All causes of death/100,000	Tier 1	Tier 2	Tier 3
Total	1080	1069	1024
White	1156	1107	1073
Black	704	836	765
Preventable Hospitalization/10,000			
Pneumonia	372	492	447
Congestive Heart Failure	453	544	456
Diabetes	22.7	25.7	27.3
Malignant Hypertension	42.5	53.9	42.6
YPLL65	6412	7622	7394

Outcomes: County Mean Values

Age adjusted rates - All causes of Death	Tier 1	Tier 2	Tier 3
Total	732	879	870
White	707	859	847
Black	989	1082	1041
Indirect/ SMR			
White	94.6	113.5	112.1
Black	136.2	145.1	134.9

Interim Findings

- Multiple-HRSTD counties in Florida:
 - Are 6-10 times the population size, older, less poor, and more Hispanic
 - Have significantly higher per capita healthcare
 AND total expenditures
 - Receive disproportionate share of federal/state health-related grants
 - Have, on average, better health status for multiple morbidity and mortality indicators

Future Analyses

- Isolate the relative effects of financial indicators and "taxing district status"
 - Preliminary results indicate grant income may be a more important determinant than per capita expenditures
- Determine the relative effect of county financial indicators and taxing district status on race-specific outcomes
 - Is there race differentiation on the benefits of financial investment in health?

White Standardized Mortality Ratio

	Tier 1	Tier 2	Tier 3	Tier 1/3
Age 0-4	68.5	93.1	88.6	77.24%
Age 5-9	72.8	121.2	106.0	68.74%
Age 10-14	77.2	117.8	105.4	73.23%
Age 15-19	88.2	126.7	109.4	80.64%
Age 20-24	90.2	141.6	98.9	91.18%
Age 25-34	83.0	116.4	95.8	86.64%
Age 35-44	85.0	113.0	98.1	86.63%
Age 45-54	87.9	107.1	99.6	88.32%
Age 55-64	90.3	105.8	99.1	91.14%
Age 65-74	92.2	101.1	100.5	91.75%
Age 75-84	96.1	100.3	101.3	94.93%
Age 85 +	99.0	100.8	102.3	96.78%
Total	94.6	102.1	100.8	93.85%

Black Standardized Mortality Ratio

	Tier 1	Tier 2	Tier 3	Tier 1/3
Age 0-4	166.5	165.5	199.9	83.25%
Age 5-9	135.2	177.7	152.8	88.49%
Age 10-14	122.3	116.7	155.1	78.83%
Age 15-19	113.0	155.4	92.1	122.72%
Age 20-24	127.9	140.4	106.0	120.65%
Age 25-34	154.7	171.5	141.4	109.40%
Age 35-44	152.6	171.3	145.1	105.11%
Age 45-54	140.7	169.7	149.5	94.11%
Age 55-64	137.7	178.8	157.2	87.58%
Age 65-74	138.9	158.4	152.7	90.97%
Age 75-84	124.0	136.3	137.2	90.36%
Age 85 +	95.3	105.4	108.4	87.91%
Total	130.3	145.3	138.8	93.90%

Questions?

Total Standardized Mortality Ratio

	Tier 1	Tier 2	Tier 3	Tier 1/3
Age 0-4	92.4	105.3	110.1	84.00%
Age 5-9	87.7	130.7	113.8	77.06%
Age 10-14	87.5	121.9	114.5	76.41%
Age 15-19	93.9	131.5	104.5	89.81%
Age 20-24	97.6	139.9	99.0	98.56%
Age 25-34	96.5	125.2	102.4	94.32%
Age 35-44	95.8	120.4	103.7	92.43%
Age 45-54	95.4	113.8	104.6	91.17%
Age 55-64	95.7	110.9	103.6	92.31%
Age 65-74	96.1	104.0	103.6	92.73%
Age 75-84	97.4	101.6	102.8	94.76%
Age 85 +	98.5	100.7	102.1	96.50%
Total	97.1	104.5	103.1	94.18%