The Hibbs Institute Health Index: Examining Health Conditions in Tyler and Other Cities in the Region
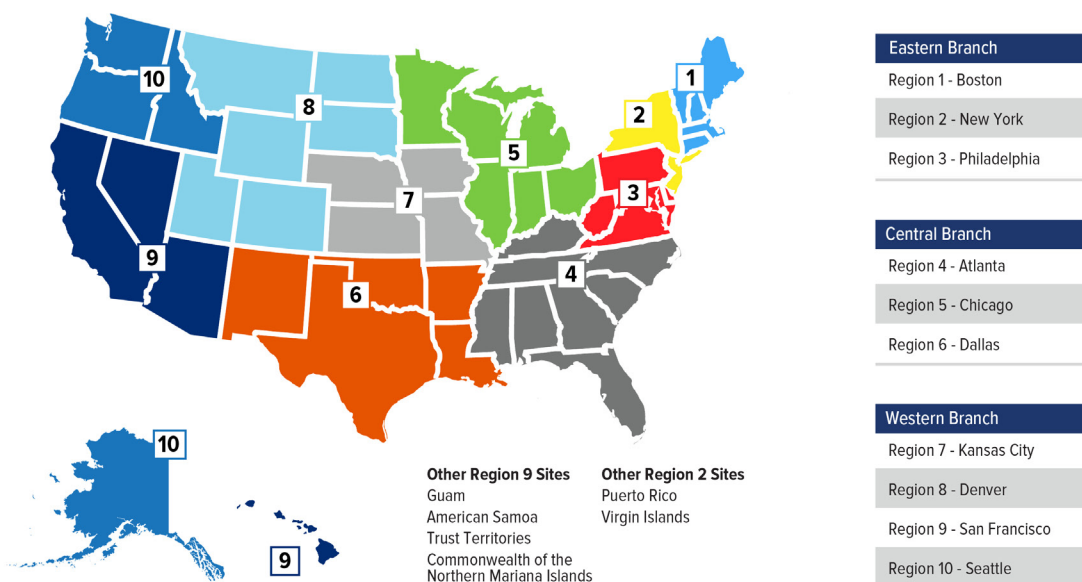### By Manuel Reyes, D.E.D

In this issue of the **Hibbs Brief**, we examine health conditions in Tyler and compare the results with other cities in the region using some of the most relevant health measures, which have been updated and expanded from our previous version completed in 2019. *The Hibbs Institute Health Index* is a weighted index[1] that compares various health conditions and measures of 38 Metropolitan Statistical Areas (MSAs) in our region. Our region (Region-6) is defined by the Agency for Toxic Substances and Disease Registry (ATSDR), and it includes Arkansas, Louisiana, Oklahoma, New Mexico and Texas (**Figure 1**). For a more equitable comparison, we only include MSAs with populations between 100,000 and one million inhabitants in the analysis. The 38 selected MSAs are shown in **Figure 2**.

Health measures serve as an effective means to examine health conditions and health status performance at a local level. These measures are used by recognized health organizations and institutions, such as the County Health Rankings (CHR) produced by the University of Wisconsin.

The Hibbs Institute Health Index utilizes data from the CHR and the United States Census Bureau to produce weighted indexes as a tool to harmonize and compare health measures. Health measures can be classified in five categories:

- *Health Outcomes*
- *Health Behavior Factors*
- *Clinical Care Factors*
- *Socioeconomic Factors*
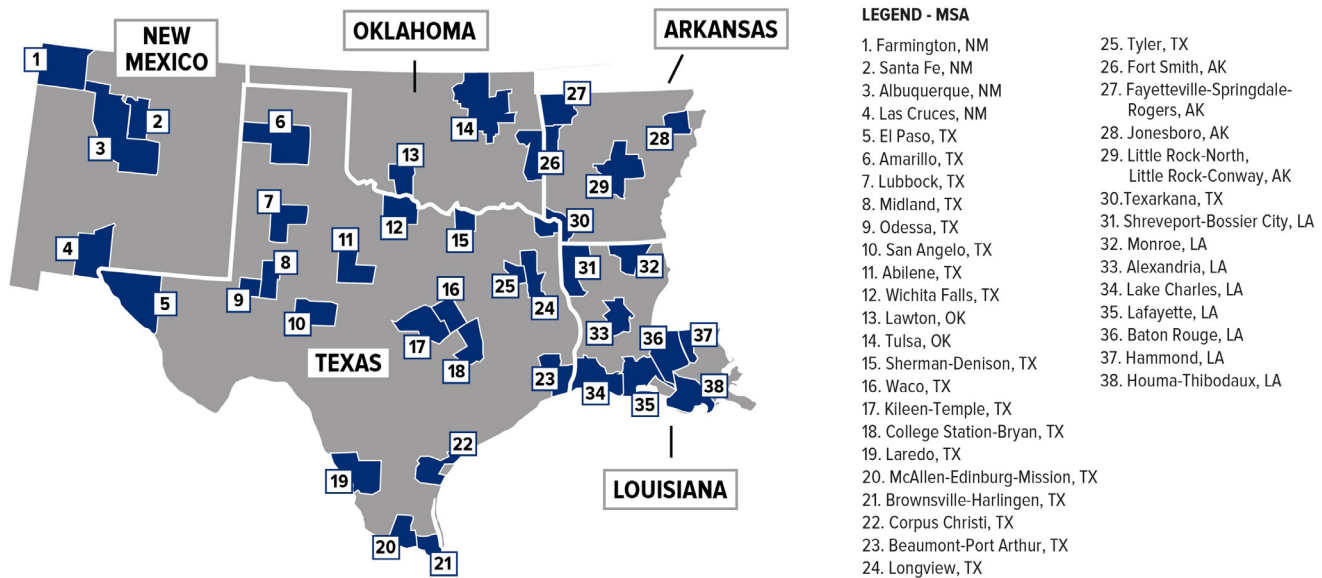- *Physical Environment Factors*

Figure 1. The Agency for Toxic Substances and Disease Registry—Regional Offices

Eastern Branch
Region 1 - Boston
Region 2 - New York
Region 3 - Philadelphia

Central Branch
Region 4 - Atlanta
Region 5 - Chicago
Region 6 - Dallas

Western Branch
Region 7 - Kansas City
Region 8 - Denver
Region 9 - San Francisco
Region 10 - Seattle

Other Region 9 Sites
Guam
American Samoa
Trust Territories
Commonwealth of the
Northern Mariana Islands

Other Region 2 Sites
Puerto Rico
Virgin Islands

Source: Agency for Toxic Substances and Disease Registry.

[1]In a weighted index, each component accounts for a predetermined portion of the overall index.

Figure 2. Selected Metropolitan Statistical Areas (MSAs)

LEGEND - MSA

1. Farmington, NM
2. Santa Fe, NM
3. Albuquerque, NM
4. Las Cruces, NM
5. El Paso, TX
6. Amarillo, TX
7. Lubbock, TX
8. Midland, TX
9. Odessa, TX
10. San Angelo, TX
11. Abilene, TX
12. Wichita Falls, TX
13. Lawton, OK
14. Tulsa, OK
15. Sherman-Denison, TX
16. Waco, TX
17. Kileen-Temple, TX
18. College Station-Bryan, TX
19. Laredo, TX
20. McAllen-Edinburg-Mission, TX
21. Brownsville-Harlingen, TX
22. Corpus Christi, TX
23. Beaumont-Port Arthur, TX
24. Longview, TX

25. Tyler, TX
26. Fort Smith, AK
27. Fayetteville-Springdale-Rogers, AK
28. Jonesboro, AK
29. Little Rock-North, Little Rock-Conway, AK
30. Texarkana, TX
31. Shreveport-Bossier City, LA
32. Monroe, LA
33. Alexandria, LA
34. Lake Charles, LA
35. Lafayette, LA
36. Baton Rouge, LA
37. Hammond, LA
38. Houma-Thibodaux, LA

Source: The Hibbs Institute and UT Tyler Marketing and Communications

The Hibbs Institute Health Index includes 12 health measures within the five mentioned health categories (three more health measures than our previous version in 2019).[2] The values of each health measure are converted into a normalized number between zero and 100 for each MSA, using their lowest and highest value, respectively. The resulting numbers are then multiplied by the corresponding weight. The weights represent a percentage and the sum adds to 100. Health Outcomes have the largest fraction in the index calculation with 50% of the weight, while Premature Death and Life Expectancy each have 25%. The remaining 10 health measures have 5% weight, totaling 50%:

- *Premature Death Rate (25%)*
- *Life Expectancy (25%)*
- *Adult Obesity (5%)*
- *Adult Smoking (5%)*
- *Teen Births (5%)*
- *Uninsured Individuals (5%)*
- *Primary Care Physicians (5%)*
- *Registered Nurses (5%)*
- *Educational Attainment (5%)*
- *Income Inequality (5%)*
- *Median Household Income (5%)*
- *Air Pollution (5%)*

Table 1 depicts the *Hibbs Institute Health Index* top 20 MSAs rankings arranged by their total scores (last two columns). The rest of the columns show the ranking obtained by those MSAs for each health measure (1 is best and 38 is worst). The MSA with the highest total score, out of the 38 examined, was Santa Fe, New Mexico with a score of 82.2 points. Fayetteville-Springdale-Rogers, Arkansas scored the second highest with 73.9, followed by College Station-Bryan, Texas with

71.7; Albuquerque, New Mexico with 62.2; Tyler, Texas with 61.2; Midland, Texas with 61.0; and Las Cruces, New Mexico with 60.4.

As mentioned above, Tyler placed fifth on the list, 21 points lower than Santa Fe, New Mexico, the highest scorer. Out of the 12 measures examined in the *Hibbs Institute Health Index*, Tyler obtained its highest ranking on Median Household Income (sixth), followed by Income Inequality (seventh), Primary Care Physicians (seventh), Registered Nurses (seventh) and Teen Births (seventh). In contrast, the measures where Tyler got its lowest scores were Air Pollution and Uninsured Individuals, ranking 26th and 31st, respectively.

On the other hand, Texarkana and Longview (the other East Texas MSAs in the group) performed considerably low. While Texarkana placed 28th on the list with 41.1 points, Longview was ranked 32nd with 37 points. Remarkably, in nine out of twelve health measures Longview's scores fell into the bottom third of the list.

One important reason for the significant differences between the Tyler MSA and the Longview MSA rankings is associated with the composition of the MSA. While Tyler MSA includes only Smith County, Longview MSA includes Gregg, Harrison, Upshur, and Rusk counties with substantial rural areas. As a cautionary note we would like to state that the notable Tyler MSA scores do not represent the health status of all counties included in East Texas. The **Hibbs Institute** has discussed the health status of East Texas in previous editions of their Newsletter bulletin.[3]

This **Hibbs Brief** is a shortened version of a white paper completed by the ***Hibbs Institute***. For the full version containing the *Hibbs Institute Health Index* detailed methodology, MSA lists per health measure and the Total Scores with rankings of the complete list of 38 MSAs, **click here** or access the ***Hibbs Institute's website***.

Table 1. Hibbs Institute Health Index, Ranking Metropolitan Statistical Areas (MSAs)

Metropolitan Statistical Area	Health Outcomes		Health Behavior			Clinical Care			Social & Economic Factors			Physical Envir.	Overall Totals	
	Premature Death Rate	Life Expectancy	Adult Obesity	Adult Smoking	Teen Births	Uninsured Individuals	Primary Care Physicians	Registered Nurses	Educational Attainment	Income Inequality	Median Household Income	Air Pollution	Total Score	Ranking
Santa Fe, NM	9	1	1	1	2	14	2	22	5	30	4	1	82.2	1
Fayetteville-Springdale-Rogers, AR-MO	2	4	3	13	5	12	24	23	11	6	2	30	73.9	2
College Station-Bryan, TX	1	2	6	11	1	17	11	38	15	38	25	23	71.7	3
Albuquerque, NM	19	12	2	4	3	4	4	15	6	12	15	15	62.2	4
Tyler, TX	10	14	23	18	7	31	7	7	16	7	6	26	61.2	5
Midland, TX	8	9	5	3	31	28	36	32	29	17	1	14	61.0	6
Las Cruces, NM	7	6	8	5	9	13	26	19	33	35	35	18	60.4	7
Killeen-Temple, TX	11	11	26	8	19	22	18	20	2	3	14	24	59.5	8
El Paso, TX	5	8	7	2	26	34	29	26	34	13	28	19	58.4	9
San Angelo, TX	14	16	18	12	13	20	23	24	18	5	8	11	57.7	10
Lafayette, LA	12	10	16	29	38	6	16	13	25	22	21	16	56.1	11
Waco, TX	13	15	28	19	8	24	17	31	27	19	26	22	54.4	12
Corpus Christi, TX	15	13	34	16	15	32	12	17	30	11	11	27	53.4	13
Jonesboro, AR	18	18	31	31	11	10	5	1	12	36	31	20	52.7	14
Tulsa, OK	16	17	10	17	6	23	10	30	7	16	9	38	52.3	15
Lubbock, TX	20	25	13	7	10	21	3	6	17	27	20	7	51.5	16
McAllen-Edinburg-Mission, TX	4	3	38	6	34	38	33	35	38	14	36	37	51.1	17
Brownsville-Harlingen, TX	6	5	35	10	33	36	30	36	36	23	38	33	49.8	18
Little Rock-North Little Rock-Conway, AR	29	20	9	26	12	2	6	5	1	29	13	25	49.7	19
Laredo, TX	3	7	36	15	36	37	38	37	37	25	23	34	49.2	20
Sherman-Denison, TX	17	19	14	22	21	30	34	21	4	2	7	29	49.2	21
Abilene, TX	23	28	15	14	14	27	28	11	10	1	18	8	47.7	22
Wichita Falls, TX	21	24	24	23	24	26	21	12	9	8	22	17	46.9	23
Lawton, OK	22	22	37	24	23	19	20	34	3	9	24	3	45.6	24
Fort Smith, AR-OK	24	21	4	27	22	15	9	28	28	20	32	32	44.2	25
Baton Rouge, LA	33	27	11	20	4	5	25	18	14	33	5	35	42.1	26
Lake Charles, LA	31	32	21	34	29	3	13	8	13	21	10	9	41.7	27
Texarkana, TX-AR	28	31	19	30	32	16	22	4	8	26	27	21	41.1	28
Beaumont-Port Arthur, TX	25	23	33	21	28	33	35	14	21	10	17	31	40.4	29
Houma-Thibodaux, LA	26	26	30	38	18	1	32	25	32	18	16	4	40.2	30
Hammond, LA	32	30	20	36	17	9	37	9	31	31	29	5	37.1	31
Longview, TX	27	29	27	25	30	29	31	27	24	24	19	28	37.0	32
Odessa, TX	30	34	22	9	37	35	15	29	35	4	3	13	35.2	33
Monroe, LA	34	35	17	37	20	8	19	3	20	37	37	10	34.0	34
Alexandria, LA	36	37	29	32	25	11	8	2	23	28	30	12	32.6	35
Shreveport-Bossier City, LA	37	36	32	35	27	7	1	16	19	34	33	36	31.3	36
Amarillo, TX	35	38	25	28	35	25	14	10	22	15	12	2	30.5	37
Farmington, NM	38	33	12	33	16	18	27	33	26	32	34	6	25.9	38

Source: Indexes calculated by the Hibbs Institute.

[2] The numbers discussed in this Hibbs Brief and detailed in the Hibbs Institute Health Index report produced in 2022-2023 are not comparable to its previous version completed in 2019. The current version includes three additional health measures (for a total of twelve) and different weights for all of them to develop the overall score.

[3] The Health Status of East Texas; Hibbs Newsletter, July 2019.
https://www.uttyler.edu/hibbs-institute/files/newsletters/2019/hibbs-newsletter-july-2019-health-status-in-the-us-with-a-focus-on-east-texas-02.pdf

The Hibbs Institute has created a **LinkedIn** page that frequently releases business and economic information. Follow our page for future brief updates, announcements and links to our periodic publications.

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