CHART Model
Community Transformation Track

Notice of Funding Opportunity Number: CMS-2G2-21-001

REFERENCES Attachment
(Information is supplementary and not required for the application; not counted towards page limits)

Texas Health and Human Services Commission

May 7, 2021
## References

**Figure 1: Population Data and Health Care Workforce Shortages**

<table>
<thead>
<tr>
<th>County</th>
<th>Total Population estimated 2019</th>
<th>Median HH Income ($)</th>
<th>% Aged 65 and older</th>
<th>% of Population in Poverty</th>
<th>Primary Care HPSA Yes/No (Type)</th>
<th>Mental Care HPSA Yes/No</th>
<th>Medically Underserved Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angelina</td>
<td>86,715</td>
<td>$51,750</td>
<td>16.6%</td>
<td>15.6%</td>
<td>Yes (Low Income)</td>
<td>Yes (Low Income)</td>
<td>No</td>
</tr>
<tr>
<td>Brown</td>
<td>37,864</td>
<td>$56,040</td>
<td>20.4%</td>
<td>13.7%</td>
<td>Yes (Low Income)</td>
<td>Yes (Low Income)</td>
<td>Yes</td>
</tr>
<tr>
<td>Burnet</td>
<td>48,155</td>
<td>$62,827</td>
<td>22.8%</td>
<td>10.5%</td>
<td>No</td>
<td>Yes (Low Income)</td>
<td>Yes</td>
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<tr>
<td>Dawson</td>
<td>12,728</td>
<td>$48,165</td>
<td>14.9%</td>
<td>20.6%</td>
<td>Yes (Geographic)</td>
<td>No</td>
<td>No</td>
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<tr>
<td>DeWitt</td>
<td>20,160</td>
<td>$52,544</td>
<td>20.0%</td>
<td>17.1%</td>
<td>Yes (Low Income)</td>
<td>Yes (Low Income)</td>
<td>Yes</td>
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<tr>
<td>Guadalupe</td>
<td>166,847</td>
<td>$78,801</td>
<td>14.2%</td>
<td>7.4%</td>
<td>No</td>
<td>Yes (Low Income)</td>
<td>Yes</td>
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<tr>
<td>Haskell</td>
<td>5,658</td>
<td>$38,613</td>
<td>22.4%</td>
<td>20.7%</td>
<td>Yes (Geographic)</td>
<td>Yes (Low Income)</td>
<td>Yes</td>
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<tr>
<td>Maverick</td>
<td>58,722</td>
<td>$40,017</td>
<td>11.9%</td>
<td>26.9%</td>
<td>Yes (High Needs)</td>
<td>Yes (High Needs)</td>
<td>Yes</td>
</tr>
<tr>
<td>Mitchell</td>
<td>8,545</td>
<td>$44,457</td>
<td>14.7%</td>
<td>19.5%</td>
<td>Yes (Low Income)</td>
<td>Yes (Geographic)</td>
<td>No</td>
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<td>Polk County</td>
<td>51,353</td>
<td>$50,416</td>
<td>19.0%</td>
<td>16.7%</td>
<td>Yes (Low Income)</td>
<td>Yes (High Needs)</td>
<td>Yes</td>
</tr>
<tr>
<td>San Augustine County</td>
<td>8,237</td>
<td>$40,094</td>
<td>27.0%</td>
<td>22.5%</td>
<td>Yes (High Needs)</td>
<td>Yes (High Needs)</td>
<td>Yes</td>
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<tr>
<td>Wichita</td>
<td>132,230</td>
<td>$51,535</td>
<td>15.0%</td>
<td>13.9%</td>
<td>Yes (Low Income)</td>
<td>Yes (High Needs)</td>
<td>Yes</td>
</tr>
<tr>
<td>Young</td>
<td>18,010</td>
<td>$52,643</td>
<td>21.0%</td>
<td>13.6%</td>
<td>Yes (Low Income)</td>
<td>Yes (Geographic)</td>
<td>No</td>
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<tr>
<td>Total</td>
<td>655,224</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Texas Population</td>
<td>28,995,881</td>
<td>$61,874</td>
<td>12.9%</td>
<td>13.6%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Community as % of state population</td>
<td>2.3</td>
<td></td>
<td></td>
<td></td>
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</table>

1 Source: Texas Association of Counties, U.S. Census Bureau, and Health Resources & Services Administration.
Figure 2: Percent of Adults with Hypertension Diagnosis by County, 2017-2019

<table>
<thead>
<tr>
<th>Counties</th>
<th>Percent of Adults with Hypertension Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angelina, Polk, and San Augustine</td>
<td>45%</td>
</tr>
<tr>
<td>Dawson, Mitchell, Brown, Wichita, Haskell, Young, and Maverick</td>
<td>38%</td>
</tr>
<tr>
<td>Guadalupe, Burnet, and DeWitt</td>
<td>31%</td>
</tr>
</tbody>
</table>

Figure 3: Percent of Hispanic Population by County in Texas Community

Source: Texas Department of State Health Services.

Source: Texas Association of Counties.
Figure 4: Population Health Data by Risk Factor and Health Care Provider Data

<table>
<thead>
<tr>
<th>County</th>
<th>Percent of Smokers</th>
<th>Percent of Adults with Diabetes</th>
<th>Percent of Adults with Obesity</th>
<th>Percent of Physically Inactive Persons</th>
<th>Number of Primary Care Physicians</th>
<th>Primary Care Physicians Ratio</th>
<th>Number of Mental Health Providers</th>
<th>Mental Health Provider Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angelina</td>
<td>16%</td>
<td>14%</td>
<td>41%</td>
<td>35%</td>
<td>52</td>
<td>1689:1</td>
<td>117</td>
<td>744:1</td>
</tr>
<tr>
<td>Brown</td>
<td>15%</td>
<td>13%</td>
<td>39%</td>
<td>34%</td>
<td>19</td>
<td>2003:1</td>
<td>69</td>
<td>550:1</td>
</tr>
<tr>
<td>Burnet</td>
<td>13%</td>
<td>18%</td>
<td>31%</td>
<td>27%</td>
<td>22</td>
<td>2127:1</td>
<td>31</td>
<td>1534:1</td>
</tr>
<tr>
<td>Dawson</td>
<td>16%</td>
<td>17%</td>
<td>29%</td>
<td>28%</td>
<td>3</td>
<td>4271:1</td>
<td>1</td>
<td>12619:1</td>
</tr>
<tr>
<td>DeWitt</td>
<td>15%</td>
<td>15%</td>
<td>27%</td>
<td>34%</td>
<td>11</td>
<td>1839:1</td>
<td>3</td>
<td>6729:1</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>13%</td>
<td>10%</td>
<td>34%</td>
<td>23%</td>
<td>56</td>
<td>2851:1</td>
<td>46</td>
<td>3559:1</td>
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<tr>
<td>Haskell</td>
<td>16%</td>
<td>10%</td>
<td>27%</td>
<td>32%</td>
<td>3</td>
<td>1915:1</td>
<td>3</td>
<td>1938:1</td>
</tr>
<tr>
<td>Maverick</td>
<td>17%</td>
<td>17%</td>
<td>38%</td>
<td>30%</td>
<td>15</td>
<td>3881:1</td>
<td>17</td>
<td>3440:1</td>
</tr>
<tr>
<td>Mitchell</td>
<td>14%</td>
<td>6%</td>
<td>31%</td>
<td>24%</td>
<td>4</td>
<td>2117:1</td>
<td>No data</td>
<td>No data</td>
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<tr>
<td>Polk</td>
<td>16%</td>
<td>16%</td>
<td>44%</td>
<td>31%</td>
<td>29</td>
<td>1695:1</td>
<td>21</td>
<td>2382:1</td>
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<td>San</td>
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<tr>
<td>Augustine</td>
<td>17%</td>
<td>24%</td>
<td>40%</td>
<td>26%</td>
<td>2</td>
<td>4127:1</td>
<td>1</td>
<td>8232:1</td>
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<tr>
<td>Wichita</td>
<td>18%</td>
<td>14%</td>
<td>35%</td>
<td>31%</td>
<td>95</td>
<td>1389:1</td>
<td>199</td>
<td>664:1</td>
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<tr>
<td>Young</td>
<td>16%</td>
<td>19%</td>
<td>34%</td>
<td>29%</td>
<td>12</td>
<td>1498:1</td>
<td>9</td>
<td>2005:1</td>
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<tr>
<td>TEXAS</td>
<td>16%</td>
<td>10%</td>
<td>30%</td>
<td>24%</td>
<td>17,239</td>
<td>1642:1</td>
<td>32,674</td>
<td>878:1</td>
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</table>

Source: County Health Rankings, 2020, Texas.
<table>
<thead>
<tr>
<th>County</th>
<th>Coordinated care, improve transitions/ decrease readmissions</th>
<th>Improve management of chronic conditions</th>
<th>Improve access to primary/specialty care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angelina</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Brown</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Burnet</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Dawson</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>DeWitt</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Guadalupe</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Haskell</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Maverick</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Mitchell</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Polk</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>San Augustine</td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>Wichita</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Young</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Source: Health and Human Services Commission, Texas Organization of Rural & Community Hospitals.
Figure 6: Texas CHART Model Community Counties, 2021

MAP OF TEXAS COUNTIES
Community Counties are highlighted in blue.

Counties and Hospitals
1. Angelina County - CHI St. Luke's Health Memorial Lufkin
2. Brown County - Hendrick Medical Center Brownwood
3. Burnet County - Ascension Seton Highland Lakes
4. DeWitt County - Cuero Regional Hospital
5. Dawson County - Medical Arts Hospital
6. Guadalupe County - Guadalupe Regional Medical Center
7. Haskell County - Haskell Memorial Hospital
8. Maverick County - Fort Duncan Regional Medical Center
9. Mitchell County - Mitchell County Hospital District
10. Polk County - CHI St. Luke's Health Memorial Livingston Hospital
11. San Augustine County - CHI St. Luke's Health Memorial San Augustine Hospital
12. Wichita County - Electra Memorial Hospital
13. Young County - Olney Hamilton Hospital and Graham Regional Medical Center
Excerpts from Community Assessments and Focus Groups about Community Health Care

From stakeholders in Region 2 including Angelina, Polk, and San Augustine Counties:

- Common health challenges include obesity, diabetes, disability, hypertension, stroke and asthma and cancer. The region has some of the highest incidence for cancer in Texas.
- Improve the health of our region by expanding and coordinating access to patient-centered primary care and behavioral health care services including health promotion and disease prevention and expand health care access and capacity for the region.

From stakeholders in Region 4 including DeWitt County:

- Region 4 confronts a number of health care challenges in meeting the health care needs of its population: Inadequate number of primary and specialty care providers. Many regional residents live in counties with limited access to basic health care services. Expanded access to services is a priority for the region and must be undertaken against the backdrop of constrained resources.
- High prevalence of chronic disease, including cancer, hypertension, diabetes, and cardiovascular disease. Regional hospital admissions and related data indicate that there is a prevalence of chronic conditions that lead to preventable hospitalizations and require a coordinated care management team approach to maximize patient outcomes.

From stakeholders in Region 6 including Guadalupe County:

- “So many of the visits for both outpatients and inpatients relate to complications of chronic disease and could be prevented with more focus on these measures. Cost savings from lowered rates of complications/visits could be diverted back into further improvements on
other initiatives. Reduction in these visits would also impact Emergency Department throughput and therefore patient satisfaction.”

- “There needs to be more focus on post-discharge quality of care (e.g. the quality of the “warm handoff”) among patients discharged from the Emergency Department or inpatient setting.”

From stakeholders in Region 8 including Burnet County:

- Three key health challenges affecting Region 8 include: limited access to primary care; limited access to behavioral/mental health services; and lack of coordinated care, especially for those with multiple needs.

From stakeholders in Region 11 including Haskell, Mitchell, and Brown Counties:

- Focus group participants frequently cited the importance of having additional specialty physicians in the community, particularly in terms of transportation challenges for seniors. Specific services mentioned included a nutritionist, ENT, endocrinology, allergy, dermatology, pediatrics, and OB/GYN specialists. *(Mitchell)*

- In general, participants often spoke about the needs of an aging population, stressing the importance of addressing chronic health issues, as well as the importance of promoting a healthy lifestyle. *(Mitchell)*

- The most frequently mentioned major health issues in the community included: diabetes (adults), obesity (children and adults), cancer, chronic obstructive pulmonary disease (COPD), cardiac/ congestive heart failure, nutrition (children and adults), aging population,
chronic disease, arthritis, dementia/Alzheimer's, hypertension, and mental health.

*Mitchell*

**From stakeholders in Region 12 including Dawson County:**

- Respondents from Dawson County said the most prevalent health issues are diabetes, heart disease (related to diabetes), obesity, cancer, and Alzheimer's disease.
- Health care in the county is good except for diabetes and cancer since those illnesses cannot be treated locally.

**From stakeholders in Region 19 including Wichita and Young Counties:**

- Community needs to identify strategies for: (1) high rates of chronic disease, including cancer, diabetes, heart disease, respiratory diseases, and obesity; (2) high costs associated with preventable hospitalization admissions and readmissions; (3) shortages of health care professionals, including mental health care providers; (4) low utilization of preventative care services, including sigmoidoscopy, colonoscopy, and immunizations, and (5) need to overcome patient access to care barriers.
- Of significance to Olney Hamilton Hospital and Young County, the diabetes rate among Hispanics is higher than among other ethnic groups. Additionally, the incidence of hypertension tends to run high among Hispanics.

**From stakeholders in Region 20 including Maverick County:**

- Top key health challenges for Region 20 include: access to care, chronic disease and disease self-management, high hospital emergency department utilization, mental health, primary health and behavior health integration. In addition, the lack of local financial resources to
overcome some of these issues creates an overarching challenge to the provision of health care for the residents in this region.

• Patient Navigation and Coordination – The lack of care coordination and navigation can result in hospital readmissions due to non-compliance with medical treatment plans and the inability to navigate the health care system. Due to the complex needs of the community and the medically underserved status, it is important to note that the population might not have the knowledge or resources available to complete their treatments.
### Figure 7: Rural Telemedicine Models Matrix

CHC 1: Lack of coordinated care  
CHC 2: Uncoordinated care transitions resulting in unplanned hospital readmissions  
CHC 3: Improved treatment and prevention of chronic conditions (e.g. diabetes, cardiovascular disease, and congestive heart failure)  
CHC 4: Limited or no access to primary and specialty care

<table>
<thead>
<tr>
<th>Telemedicine Model</th>
<th>Telemedicine Model Summary</th>
<th>Community Health Challenges (CHC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridges to Care Transitions-Remote Home Monitoring and Chronic Disease Self-Management</td>
<td>Discharged patients use remote monitoring and get guidance from providers about disease self-management with a special focus on behavioral health wellness.</td>
<td>CHC 1</td>
</tr>
<tr>
<td>eResidential Facilities Healthcare Services Access Project</td>
<td>Using 2-way video, a specialized equipment, the aim is to keep nursing home residents in their own facility with the caregivers who know them best and to reduce unnecessary hospital admissions/readmissions.</td>
<td>CHC 1</td>
</tr>
<tr>
<td>TelEmergency program:*</td>
<td>Specialty trained nurse practitioners and physicians at university health science center work with local doctors via a telemedicine connection. The team works together in real-time to care for patients in ER.</td>
<td>CHC 1</td>
</tr>
<tr>
<td>Hospital at Home Model</td>
<td>Offers patients who need to be hospitalized the option of receiving hospital-level care at home for conditions that can be safely treated there.</td>
<td>CHC 1</td>
</tr>
<tr>
<td>TeleHealth Critical Care</td>
<td>Physicians and critical care nurses from a remote location monitor patients and support the local care team to provide higher level of treatment locally.</td>
<td>CHC 1</td>
</tr>
<tr>
<td>PennCare’s at Home Remote Monitoring TeleHealth Program</td>
<td>Technology enhances community partnerships and coordination to remotely monitor patients with chronic conditions.</td>
<td>CHC 1</td>
</tr>
<tr>
<td>Electronic Health Records Platform</td>
<td>Using technology to improve care coordination starts with a robust HIT system that allows real-time access and tracking of comprehensive patient plans, preferences, and service use.</td>
<td>CHC 1</td>
</tr>
</tbody>
</table>
Figure 8: Brief Description of Texas Medicaid

HHSC contracts with managed care organizations to provide health care services to persons with Medicaid through four programs: STAR, STAR+PLUS, STAR Kids, and STAR Health. Each program is designed to provide health care services for a specific population. Because of Texas’s size, it is divided into 13 regions or service delivery areas (SDA). MCOs can choose the SDA and the Medicaid program for which they want to contract with the state. A map of the SDAs and corresponding MCOs contracted in each region can be found in Figure 9.

Medicaid Program and Populations

1. STAR is a statewide program primarily for pregnant women, low-income children and some families. Most people in Texas Medicaid get their coverage through STAR.

2. STAR+PLUS is a statewide program for adults with disabilities and those age 65 and older (including those dually eligible for Medicare and Medicaid), and women with breast or cervical cancer.

3. STAR Kids is a statewide program for children and youth age 20 and younger with disabilities, including children and youth receiving benefits under the Medically Dependent Children Program (MDCP) waiver.

4. STAR Health is a statewide program that provides coordinated health services to children and youth in foster care and kinship care. STAR Health benefits include medical, dental and
behavioral health services—as well as service coordination and a web-based electronic medical record, known as the Health Passport.
Figure 9: Map of Texas Medicaid Service Delivery Areas and Managed Care Organizations

Managed Care Service Areas

TEXAS

STAR - Aetna, Amerigroup, Cook Children’s
STAR PLUS - Amerigroup, Cigna-HealthSpring
STAR Kids - Aetna, Amerigroup, Cook Children’s
CHIP - Aetna, Amerigroup, Cook Children’s

DALLAS
STAR - Amerigroup, Molina, Parkland
STAR PLUS - Molina, Superior
STAR Kids - Aetna, Amerigroup
CHIP - Amerigroup, Molina, Parkland

MRSA NORTHEAST
STAR - Amerigroup, Superior
STAR PLUS - Cigna-HealthSpring, United
STAR Kids - Texas Children’s, United
CHIP - Molina, Superior

MRSA CENTRAL
STAR - Amerigroup, RightCare-Scott and White, Superior
STAR PLUS - Superior, United
STAR Kids - Blue Cross and Blue Shield of Texas, United
CHIP - Molina, Superior

JEFFERSON
STAR - Amerigroup, Community Health Choice, Molina, Texas Children’s, United
STAR PLUS - Amerigroup, Molina, United
STAR Kids - Texas Children’s, United
CHIP - Amerigroup, Community Health Choice, Molina, Texas Children’s, United

HARRIS
STAR - Amerigroup, Community Health Choice, Molina, Texas Children’s, United
STAR PLUS - Amerigroup, Molina, United
STAR Kids - Amerigroup, Texas Children’s, United
CHIP - Amerigroup, Community Health Choice, Molina, Texas Children’s, United

BEXAR
STAR - Aetna, Amerigroup, Community First, Superior
STAR PLUS - Amerigroup, Molina, Superior
STAR Kids - Amerigroup, Community First, Superior
CHIP - Aetna, Amerigroup, Community First, Superior

HIDALGO
STAR - Driscoll, Molina, Superior, United
STAR PLUS - Cigna-HealthSpring, Molina, Superior
STAR Kids - Driscoll, Superior, United
CHIP - Molina, Superior

MRSA WEST
STAR - Amerigroup, FirstCare, Superior
STAR PLUS - Amerigroup, Superior
STAR Kids - Amerigroup, Superior
CHIP - FirstCare, Superior

LUBBOCK
STAR - Amerigroup, FirstCare, Superior
STAR PLUS - Amerigroup, Superior
STAR Kids - Amerigroup, Superior
CHIP - FirstCare, Superior

EL PASO
STAR - El Paso First, Molina, Superior
STAR PLUS - Amerigroup, Molina
STAR Kids - Amerigroup, Superior
CHIP - El Paso First, Superior

TRAVIS
STAR - Blue Cross and Blue Shield of Texas, Dell Children’s, Superior
STAR PLUS - Amerigroup, United
STAR Kids - Blue Cross and Blue Shield of Texas, Dell Children’s, Superior
CHIP - Blue Cross and Blue Shield of Texas, Dell Children’s, Superior

BEXAR
STAR - Aetna, Amerigroup, Community First, Superior
STAR PLUS - Amerigroup, Molina, Superior
STAR Kids - Amerigroup, Community First, Superior
CHIP - Aetna, Amerigroup, Community First, Superior

HIDALGO
STAR - Driscoll, Molina, Superior, United
STAR PLUS - Cigna-HealthSpring, Molina, Superior
STAR Kids - Driscoll, Superior, United
CHIP - Molina, Superior

TEXAS Health and Human Services

Effective September 1, 2020
Map Prepared by: Texas Health and Human Services Commission
Center for Analytics and Disparities Support, MPH.
August 13, 2020

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