Cook Children's

2021 COMMUNITY HEALTH NEEDS ASSESSMENT

This report is provided in fulfillment of the Internal Revenue Service Section 501(r)(3)(A) requirements for Charitable Hospitals to conduct a community health needs assessment (CHNA). This 2021 CHNA was approved by Cook Children's Board of Trustees on April 26, 2022 and is now posted for public comment. Public comment on this report is encouraged and should be sent via email to CHNAFeedback@cookchildrens.org.

Cook Children's

OUR PROMISE AND VALUES

Cook Children's Health Care System embraces an inspiring promise — **to improve the health of every child through the prevention and treatment of illness, disease and injury**. We're proud of our more than 100-year history and our rich tradition of serving the children of our community. Our not-for-profit organization comprises eight companies: our original medical center in Fort Worth, our physician network, our home health company, our surgery centers, our health plan, our health services, and our health foundation. With more than 60 primary, specialty and urgent care locations throughout Texas, families can access our top-ranked specialty programs and network of services to meet the unique needs of their children. For more than 100 years, we've worked to improve the health of children from across our original service area of Denton, Hood, Johnson, Parker, Tarrant and Wise counties. With expansion into the Prosper, Texas, area, construction for a second medical center is currently underway, and it is set to open in the fall of 2022. Currently, the Prosper area is home to a new Cook Children's urgent care clinic, surgery center and eight primary care offices. The new medical center in Prosper will provide care to a primary service area of Collin, Denton and Grayson counties.

At Cook Children's, we believe that childhood should be simple. But when things get complicated, we also believe that every child has the right to the very best care possible.

We combine the art of caring with leading technology and extraordinary collaboration to provide exceptional care for every child. This has earned Cook Children's a strong, far-reaching reputation, with patients traveling from around the country and the globe to receive lifesaving pediatric care. Cook Children's is honored to continually receive recognition for our outstanding efforts and outcomes in pediatric health care.

PURPOSE OF REPORT

This triennial 2021 Community Health Needs Assessment (CHNA) is being conducted to:

- Fulfill our promise to improve the health of every child in our eight-county service region.
- Satisfy IRS Notice 2011-52 addressing the CHNA for charitable hospitals in section 501(r)(3).
- Serve as a Joint CHNA Report for Cook Children's Medical Center-Fort Worth and Cook Children's Medical Center-Prosper — who define their community characteristics to be the same.
- Increase access to health care for children in need, with emphasis on underserved populations.
- Identify and prioritize health needs and the resources potentially available to address them.
- Support community stakeholders, programs, coalitions, partnerships, research and policy.
- Enhance community knowledge and capacity to prevent child illness, disease and injury.
- Assess the roles of health care providers and organizations in improving community health.
- Share findings with the public via the Cook Children's website, an interactive dashboard, community presentations, social media and other dissemination efforts.

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For all other CHNA data results:
Community Health Needs Assessment Report. (2021). Cook Children's Health Care System. Fort Worth, Texas; or Cook Children's CHNA 2021 at https://www.cookchildrens.org/about/community-outreach/community-health-needs-assessment/ (accessed month/year).

ACKNOWLEDGMENTS

The Center for Children's Health recognizes the many community partners and organizations who shared their insight and experience with us to help elevate our 2021 CHNA process. Through gathering feedback from various community members, we believe this assessment represents the priorities, assets and challenges of the families and children living in our eight-county service region that both the Fort Worth and Prosper Cook Children's Medical Center campuses serve. Our Cook Children's service area is home to many organizations and individuals who are working diligently to improve the health of children through collaboration, innovation and determination. It is an honor for Cook Children's to partner with our community in this endeavor.

Community Stakeholders

External Advisory Members (Served July 2020–August 2021 and represented the organizations listed below during that timeframe.)

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Cook Children's Interdepartmental Support

Center for Children's Health*
Compliance
Finance
Healthcare Analytics
Health Equity and System Administration
Health Plan
Internal Audit
Legal
Media Services
Research
Strategic Marketing and Communication

*See Contact Information for 2021 CHNA individual authors and report contributors.

A Message to Our Community

Dear valued community member,

Our work at Cook Children's is grounded in our system's promise: "Knowing that every child's life is sacred, it is the Promise of Cook Children's to improve the health of every child through the prevention and treatment of illness, disease and injury." Through this promise, we strive to fulfill our commitment to families in making North Texas one of the healthiest places to raise a child. One way we do this is by offering community programs, collaborations and research through the Center for Children's Health (the Center).

Although Cook Children's has always used health care data to drive community outreach services, we began conducting formal assessments in 2009. Our community health needs assessment (CHNA) is conducted every three years to identify the health needs of children in our eight-county service area and determine or confirm community health outreach priorities for action.

Recognizing that children's health issues are complex and that successful implementation of solutions requires a collaborative effort among a broad range of organizations, the Center makes intentional efforts to share its CHNA findings with the community. The Center develops strategies for addressing targeted children's health priorities through research and an infrastructure that supports effective delivery of community and family services. Our services are data driven, evidence informed, and provided using high standards of community practice and service delivery.

We know our communities offer strong support to families and children. The unique perspective that community leaders and families provide during the CHNA data collection process plays a key role in helping us integrate all of this important information and guides our efforts to address the identified health priorities. We sincerely appreciate the leadership provided by our community partners, and we look forward to continuing our work to improve the health of children in our communities.

Sincerely,

Christian Pedigo, MHA, RN
Senior Vice President
System Planning, Healthcare Analytics, and The Center for Children's Health

OVERVIEW OF THE ASSESSMENT PROCESS

In 2009, Cook Children's began conducting formal community health needs assessments (CHNAs) every three years to identify the health needs of children in our Fort Worth Medical Center service area of Denton, Hood, Johnson, Parker, Tarrant and Wise counties. To determine or confirm community health priorities for action, we established the Community-wide Children's Health Assessment and Planning Survey (CCHAPS), reviewed publicly available data, and conducted focus groups with parents and children. We acknowledge the complexity and intersectionality of children's health issues and the essential nature of community collaboration among a broad range of organizations. To build upon our collective wisdom, Cook Children's engages multiple community partners in this effort to research, understand, communicate and address children's health issues. Assessments were conducted, priorities confirmed and implementation strategies developed in 2009, 2012, 2015, 2018 and now 2021.

Cook Children's created the Center for Children's Health (the Center) in 2011 to provide an infrastructure for using children's health assessment data to guide community programs and stakeholder collaborations that *prevent* illness, disease and injuries in children. The Center oversees a regular community health needs assessment, community research and community health outreach. All three categories of Center activities focus on increasing access to preventive services for underserved populations. Figure 1 illustrates our Cook Children's community benefit process in relation to the Internal Revenue Service Section 501(r)(3)(A) requirements. This 2021 CHNA report fulfills step 1 within the figure below. A separate Community Health Implementation Strategy Plan highlights strategies developed to address identified needs. There are separate strategies for both Cook Children's Medical Center-Fort Worth and Cook Children's Medical Center-Prosper.

Figure 1. The Cook Children's community benefit process

Joint Report

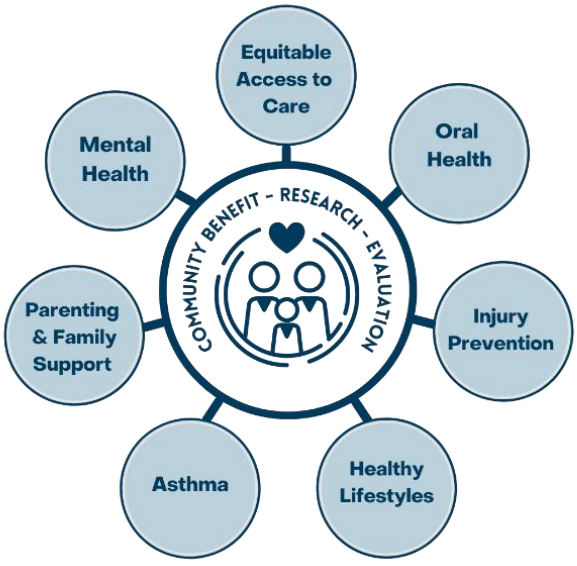
This 2021 Community Health Needs Assessment report is intended to serve as a *joint assessment* for the main Cook Children's Medical Center in Fort Worth and the new Cook Children's Medical Center in Prosper, opening in the fall of 2022. The Fort Worth Medical Center's primary service area encompasses Denton, Hood, Johnson, Parker, Tarrant and Wise counties. The Prosper Medical Center serves the primary counties of Collin, Denton and Grayson. Our 2021 assessment intentionally collected data in Collin and Grayson counties to represent those communities in the Prosper service area. Denton County falls within both the Fort Worth and Prosper service areas. A more detailed description of characteristics for our population served within the Fort Worth and Prosper service areas is included within the section titled, Our Community Served.

PRIORITY HEALTH ISSUES

Based on the 2009 initial assessment results, the Cook Children's Board of Trustees prioritized seven children's health issues identified by parents and community leaders on April 28, 2009, using group process techniques followed by a nominal voting exercise. Reviews of data findings from subsequent community health assessment processes in 2012, 2015 and 2018 confirmed the importance and re-prioritization of these issues for continuing focused intervention. Although progress in addressing these issues is consistent, the growing number of children and the overwhelming need outlined in this and earlier reports are evidence that continued focus on these issues is paramount. The Cook Children's Board of Trustees reviewed and approved these issues as continued priorities on Sept. 24, 2013, Sept. 27, 2016, and Dec. 3, 2019. This 2021 report and its subsequent implementation strategies will go before the Cook Children's Health Care System Board in fiscal year 2022 for review and approval.

The intention of our 2021 CHNA is to build upon previous assessment efforts to refine existing health priority areas and to identify new areas of concern for the community. This assessment focuses on the child health issues previously prioritized by the Cook Children's Board of Trustees, with an emphasis on community-level social determinants of health and the impact of COVID-19. As outlined in Figure 2 and described in more detail within the 2021 CHNA Findings section of this report, the seven issues prioritized in 2021 are (1) equitable access to health care, (2) asthma, (3) healthy lifestyles (obesity prevention), (4) mental health, (5) oral health, (6) parenting and family support (abuse and neglect prevention) and (7) injury prevention. These health issues are intentionally phrased to be more solution based. For example, instead of prioritizing child abuse and neglect, we're rephrasing this priority to parenting and family support to emphasize how Cook Children's and our community can best address the needs identified. Additionally, as Cook Children's developed implementation strategies to tackle these priorities, we considered the intersectionality of these seven issues. For instance, the intersectionality of equitable access to care is essential within all of our prioritized health topics and is discussed in more detail within each health issue section of our findings.

Figure 2. Health issues prioritized from the Cook Children's 2021 CHNA



2021 CHNA METHODOLOGY

To assess the status of the prioritized health issues and the estimated number of children impacted, Cook Children's applied academic research standards for both primary and secondary data collection. Data collection occurred November 2020–May 2021. Community respondents were located in the Cook Children's eight-county service area of Collin, Denton, Grayson, Hood, Johnson, Parker, Tarrant and Wise counties, which is all encompassing of the service areas for Cook Children's Medical Center-Fort Worth and Cook Children's Medical Center-Prosper.

This three-minute video illustrates a high-level overview of our 2021 methodology. Further methodology details are revealed in the following three pages. The input provided through our community leader survey, community leader interviews and external advisory committee fulfilled the requirements of collecting input from 1) "individuals with special knowledge of or expertise in public health" and 2) "federal, tribal, regional, state, or local health or other departments or agencies with current data or other information relevant to the health needs of the community"[1] served by Cook Children's.

In addition to the community leader interviews and external advisory committee input, collecting data through face-to-face interviews with families experiencing homelessness, utilizing results from a hidden homeless survey, as well as oversampling hard to reach areas with our parent survey — all fulfilled the requirement of collecting input from "leaders, representatives, or members of medically underserved, low-income, and minority populations, and populations with chronic disease needs, in the community served by the hospital facility."[1] More information is included in the section, Giving a Voice to all Children.

Primary Data Collection

Parent Survey. Our parent survey is the Community-wide Children's Health Assessment and Planning Survey (CCHAPS). From November 2020 through May 2021, the ETC Institute administered this survey to primary caregivers through a combination of mail, phone and internet communications to a random sample, representative of families with children from birth to age 17 in the eight-county service area. Surveys were available in English and Spanish. The following list provides an overview of design, sampling, and administration details. Additional survey sampling and administration information is located in Appendix B.

- **Survey Design**: A survey of 56 questions assessed access to health care, health insurance, overall health and well-being, oral health, emotional and mental health, healthy lifestyles (nutrition, physical activity), home and neighborhood safety, and family and caregiver relationships. Many survey questions aligned with national and state data benchmarks, such as the National Survey for Children's Health, Healthy People 2030, Youth Risk Behavior Surveillance, Gallup U.S. Poll, Mental Health America and Safe Kids Worldwide. Questions were also enhanced to better identify impacts from social determinants and COVID-19 on child and family well-being. The average response time was around 25 minutes.

[1] *Community Health Needs Assessment for Charitable Hospital Organizations - Section 501(r)(3) | Internal Revenue Service*. (2021, August 3). Internal Revenue Service. https://www.irs.gov/charities-non-profits/community-health-needs-assessment-for-charitable-hospital-organizations-section-501r3

- **Sample**: The sampling plan for the survey was designed to gather statistically representative data of children from birth to age 17 living in the eight-county service area. A total of 43,500 parents and caregivers in the region were selected at random to receive the survey. Only one parent per household was selected.
- **Data Collection**: A total of 5,715 parents and caregivers completed the survey, which represents a 13.1% response rate. The survey was administered by a combination of phone, mail and internet communications. The survey included a cover letter that explained the purpose of the survey. Respondent demographics were monitored throughout the data collection process to ensure a representative sample according to gender, race and ethnicity, marital status, education, and household income.
- **Reliability**: Findings are representative of children from birth to age 17 at the eight-county and individual-county levels. The overall results for 5,715 completed surveys have a precision of at least plus or minus 1.3% at the 95% level of confidence. The survey findings presented in this report were weighted by county to ensure the geographic distribution of the survey sample was comparable to the actual distribution of the service area population. The survey data was expanded to match the 2021 U.S. census estimates for the 1,269,810 children under age 18 living in the eight-county area with regard to age, race, income, Hispanic ancestry and gender.
- **Limitations**: Parent perception and knowledge may have influenced results. Findings are descriptive, not causal. In national, state, and local surveys, hard-to-reach populations often include caregivers of young children (ages 0–5), non-English speakers, and low-income persons. Multiple factors could impact response rates from hard-to-reach populations. While the data from this parent survey is representative of the population of children by age, race/ethnicity, income, and gender. To address these potential limitations and information gaps in assessing the health needs of a large, diverse population of children, our 2021 CHNA methodology also included interviews with families experiencing homelessness, a hidden homeless survey, parent focus groups, and a community leader survey and interviews. The section, Giving a Voice to All Children, highlights how this assessment accounted for information gaps from hard-to-reach populations.

Face-to-Face Survey Interviews. Through one-on-one interviews, MHMR of Tarrant County administered the parent survey to an intentional sample of caregivers within families experiencing homelessness in shelters or within families with at least one undocumented member. Interviews were conducted with parents and caregivers from Mission Arlington, Presbyterian Night Shelter and Union Gospel Mission. This sample of respondents is not representative of our eight-county service area, yet it still provides a better understanding of the unique challenges these families face with accessing health care and community resources for their children**.**

Limitations: Due to challenges inherent in counting the homeless population and parents and caregivers who are undocumented, it is difficult to assess the sample size required to be representative. In addition, interviews were conducted at organizations providing services and/or shelter to the participants, and therefore, findings may not be representative of homeless or undocumented parents who are not receiving services or who are residing outside these organizations' service regions.

Focus Groups or Case Studies. From April through May 2021, a team from University of North Texas Health Science Center at Fort Worth's School of Public Health conducted six virtual focus groups and one interview with parents across the eight-county service area. Community partners and program staff within the Center for Children's Health helped advertise and refer participants via email. These focus groups provided an opportunity for parents and caregivers to share additional information beyond questions within in the parent survey. Priority topics within these focus groups included asthma, oral health, mental health, healthy lifestyles, injury prevention, parenting support, COVID-19 and equitable access to care. Appendix C contains additional focus group information.

Limitations: Focus group findings are contextual. The sample size of parents participating in focus groups is considerably smaller than the parent survey sample size. For this reason, the findings from these methods serve as additional qualitative insight into the parent survey findings rather than a statistically valid comparison. Limitations of focus group methodology in general may also affect data quality.

Hidden Homeless Survey. The Center for Transforming Lives conducted a survey of families with children from birth to age 17 who were living within motels or extended-stay properties throughout Tarrant County from February to October 2021. Seventy families completed the anonymous surveys on-site at the motel locations. The majority of survey respondents were from Fort Worth or Arlington. Selected results from this survey are included within this assessment.

Limitations: The fear of survey participation among this population made data collection challenging and may have impacted responses from parents and caregivers.

Community Leader Survey. The ETC Institute also administered an email survey to a purposive sample of community leaders to obtain input regarding children's health issues from their perspectives. The survey included general questions about children's health priorities and questions designed to assess the impact of adverse childhood experiences (ACEs) in their communities. The mailing list included 1,881 representatives from city and county governments, county public health departments and agencies, nonprofit organizations, schools, faith-based organizations and clergy, and health care. A total of 306 responses were received, for a 16% response rate. The results for the random sample of 306 respondents have a 95% level of confidence with a precision of at least plus or minus 5.6%. The percentages of survey respondents by role within the community and by primary county represented are included in Appendix B.

Limitations: The sample represents community leaders at the eight-county level according to how we defined "community leader." However, findings are not representative of community leaders at the individual-county level. In addition, findings represent respondents' perceptions and opinions of children's health issues.

Community Leader Interviews. From April through May 2021, a team from the Center for Children's Health (the Center) conducted 20 virtual interviews with community leaders across the eight-county service area. Community partners and program staff within the Center helped recruit participants based on their expertise and diverse roles within the community. These interviews provided an opportunity to collect information from a wide range of community leaders with firsthand knowledge about the community. Interviewees discussed pressing issues or concerns in the community, providing additional context for the community leader and parent survey findings. Priority topics discussed during the interviews included the impact of COVID-19, mental health, ACEs, housing and food security, healthy lifestyles, injury prevention, and equitable access to health care. Interviewees were selected due to their

Limitations: Interview findings are contextual. The sample size of leaders participating in interviews is considerably smaller than the community leader survey sample size. For this reason, the findings from these methods serve as additional qualitative insight into survey findings rather than a statistically valid comparison. Limitations of interview methodology in general may also affect data quality. Findings may not be representative of community leaders at the individual-county level. In addition, findings represent respondents' perceptions and opinions of children's health issues.

External Advisory Committee. From July 2020 through August 2021, we convened an External Advisory Committee consisting of 21 community partners on behalf of the eight counties within our service area, who graciously shared their time and insight with us as we were finalizing our parent and community leader survey questions. They also spent time creating awareness of our surveys during data collection, and some provided community leader interviews. These individuals met virtually and shared incredibly helpful feedback via email. Cook Children's applied committee feedback to the CHNA, including best practices for survey communication methods, inclusivity for reaching diverse populations and question enhancement for better assessing health equity. Committee members represented backgrounds in academia, public health, health care, local government, public school systems and nonprofit organizations serving medically underserved or low-income families.

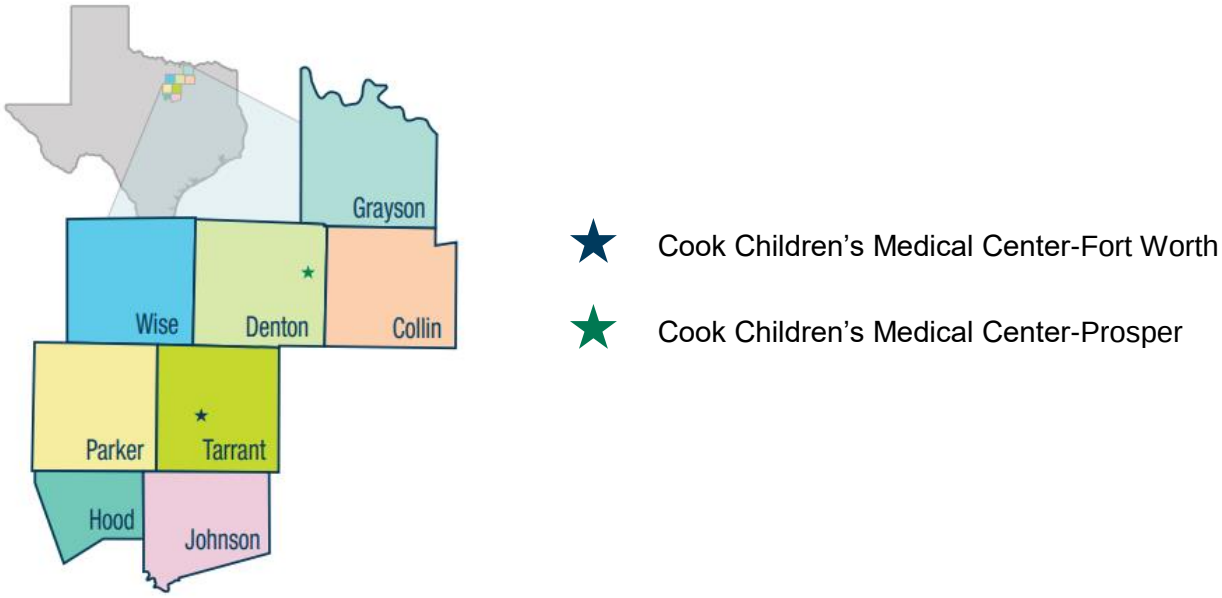
Secondary Data Review

The secondary data is a supplement to the findings from the parent and community leader surveys, as well as to the qualitative data. Secondary data from national, state, and local public health, school and academic sources provided a deeper understanding of complex social, economic and environmental factors that influence child health outcomes at the individual and community levels. We utilized at least eight to 10 sources for each of the seven priority health issues to determine national, state and, if available, local trends.

OUR COMMUNITY SERVED

For community benefit reporting purposes, Cook Children's defines its *primary* community served as the eight counties of Collin, Denton, Grayson, Hood, Johnson, Parker, Tarrant and Wise counties within North Central Texas. This Cook Children's service area provides the *majority* of inpatient admissions or patient encounters within our Fort Worth medical center and physician offices, urgent care centers and specialty clinics. This North Central Texas area is home to the **Cook Children's Medical Center-Fort Worth** campus and the **Cook Children's Medical Center-Prosper** campus, which opens in the fall of 2022. For this joint CHNA report, both the Fort Worth and Prosper campuses define their community and population served characteristics to be the same; therefore, the findings revealed later in this report highlight learnings for the eight-county service area overall, as well as notable findings for the Fort Worth Service Area (FWSA), the Prosper Service Area (PSA) or a particular individual county within these service areas. The map below (Figure 3) demonstrates the location of the Fort Worth and Prosper campuses within the overall eight-county service area.

Figure 3. Map of the Cook Children's eight-county service area



Description of Service Areas

Below are the counties defined within the FWSA and the PSA. Due to the proximity of Denton County to both medical center campuses, it is intentionally included in both services areas — but it is only represented once within the eight-county parent survey results.

Fort Worth Service Area (FWSA)

Denton
Hood
Johnson
Parker
Tarrant
Wise

Prosper Service Area (PSA)

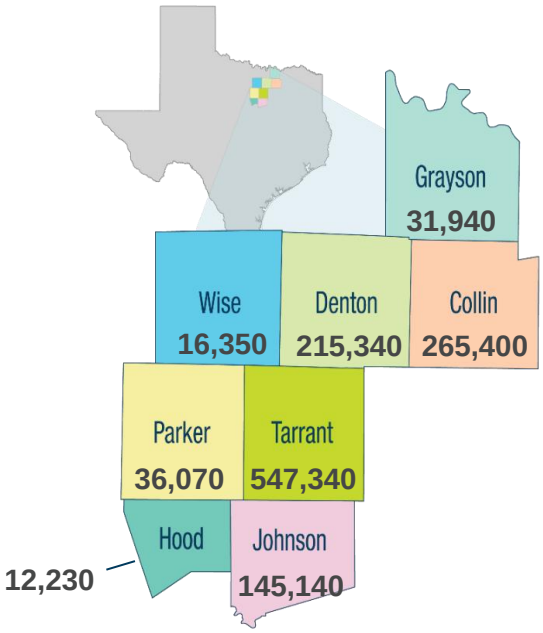
Collin
Denton
Wise

The U.S. Census Bureau classifies these counties as follows: Collin County–mostly urban, 5% rural; Denton County–mostly urban, 7% rural; Grayson County–rural 43%; Hood County–mostly urban, 33% rural; Johnson County–mostly urban, 38% rural; Parker County–rural 56%; Tarrant County–mostly urban, 1% rural and Wise County–mostly rural 72%.

Children and Families Within Service Areas

According to U.S. census estimates, the Cook Children's eight-county service area is home to a diverse population of 4,414,214 people, and **1,269,810 (28%) are children 17 years and younger.** The FWSA total population of 3,309,223 includes 972,470 children from birth to age 17, while the PSA total population of 1,938,813 includes 512,680 children from birth to age 17. Figure 4 demonstrates the number of children from birth to age 17 within each county.

Figure 4. Map of the number of children birth to age 17 by county



Social Characteristics of Service Areas

As supported by Table 1 below, the 2019 American Community Survey five-year estimates show that the annual median income for families with children under age 18 range between $63,311 in Grayson County to $117,935 in Collin County. Additionally, nearly 150,000 children live in households with income below the poverty level — estimated to be 12% of the 1.2 million children in the eight-county service area. The percent of children in households that receive Supplemental Security Income (SSI), cash public assistance or food stamps/SNAP benefits ranges from 8% in Collin County to 27% in Grayson County.

Table 1. Family income, poverty level and public assistance by county

County	Median Family Income of Households With Children	Number (Percent) of Children in Households With Income Below Poverty Level	Number (Percent) of Children in Households Receiving SSI, Cash Public Assistance or Food Stamps/SNAP in the Past 12 Months
Collin	$117,935	17,875 (7%)	19,437 (8%)
Denton	$109,165	17,390 (8.4%)	25,184 (12%)
Grayson	$63,311	5,729 (18.7%)	8,480 (27%)
Hood	$83,382	1,769 (14.5%)	2,593 (21%)
Johnson	$70,593	6,270 (14.6%)	10,134 (23%)
Parker	$98,079	3,319 (10.1%)	5,178 (16%)
Tarrant	$71,782	91,928 (17.1%)	133,835 (25%)
Wise	$73,000	2,644 (16.3%)	3,483 (21%)

Source: US Census Bureau. (2022, March 7). *American Community Survey 5-Year Data 2019*. United States Census Bureau. Retrieved November 15, 2021, from https://www.census.gov/data/developers/data-sets/acs-5year/2019.html

Medically Underserved Children

Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) identify geographic areas and populations with a lack of access to primary care services, too few primary care providers, high infant mortality, high poverty and/or high elderly populations. Each MUA and MUP is assigned a Medical Underservice Score from zero to 100, with the lowest scores indicating the highest need. To qualify for designation, this score must be less than or equal to 62, except for a governor designation, which does not receive a score. These designations also help officials establish additional support or community health centers where needed. The Cook Children's eight-county service area contains three currently designated **MUAs** (in Denton and Tarrant) and two currently designated **MUPs** (in Grayson and Tarrant) as defined by the Health Resources and Services Administration. Both current and previously designated MUAs and MUPs are included in Table 2. For further information on MUAs and MUPs visit the Health Resources and Services Administration website.

Table 2. Medically underserved designations among the eight-county service area

Medically Underserved Areas

County	Service Area Name	Medical Underservice Score	Rural Status	Status
Collin	Collin Service Area	58.7	Non-rural	Previously designated
Denton	North Harris County	59.6	Non-rural	Previously designated
Denton	Poverty Population	0 (Governor's Exception)	Non-rural	Designated
Grayson	Grayson Service Area (1)	56.2	N/A	Previously designated
Grayson	Grayson Service Area (2)	54.6	N/A	Previously designated
Johnson	Johnson Service Area	56.2	Partially Rural	Previously designated
Tarrant	Central Service Area	55.3	Non-rural	Previously designated
Tarrant	Fort Worth-North	58	Non-rural	Designated
Tarrant	Diamond Hill Service Area	57.5	Non-rural	Designated
Tarrant	Nueces Service Area	60.4	Non-rural	Previously designated
Wise	Wise Service Area	55.7	N/A	Previously designated

Medically Underserved Populations

County	Service Area Name	Medical Underservice Score	Rural Status	Status
Grayson	Low Income-Grayson County	61	Partially rural	Designated
Grayson	Grayson *(multiple census tracts)*	61.5	N/A	Previously designated
Tarrant	Low Income-East Side	59.8	Non-rural	Designated

Source: *MUA Find*. (2021). U.S. Department of Health Resources and Services Administration. Retrieved November 30, 2021, from https://data.hrsa.gov/tools/shortage-area/mua-find

Health Professional Shortage Areas

Health Professional Shortage Areas (HPSAs) are designated by the Health Resources and Service Administration (HRSA) as areas having shortages of primary medical care and/or dental or mental health providers. These HPSAs may be geographic (provider shortages for an entire county or service area), population-based (e.g., provider shortages for a specific group of people, such as low income or Medicaid eligible) or facilities-based (e.g., shortages of public or nonprofit healthcare facilities). Each HPSA is assigned a score from zero to 26, with higher scores indicating greater need. As indicated in Table 3, the Cook Children's eight-county service area contains 26 designated HPSAs, with scores ranging from 10 to 25.

Table 3. Health professional shortage designations among the eight-county service area

Health Professional Service Areas

County	HPSA Name	HPSA Score	Discipline	Rural Status
Collin	LI-MHCA - Collin County	16	Mental Health	Non-rural
Denton	Health Services of North Texas	21	Primary Care	Non-rural
	Health Services of North Texas	25	Dental Health	Non-rural
	Health Services of North Texas	20	Mental Health	Non-rural
	LI-MHCA - Denton County	16	Mental Health	Non-rural
Grayson	LI - Grayson County (1)	14	Primary Care	Partially Rural
	LI - Grayson County (2)	17	Mental Health	Partially Rural
Hood	Hood County	13	Mental Health	Rural
Johnson	LI - Johnson County	17	Mental Health	Partially Rural
Parker	Campbell Clinic	14	Primary Care	Rural
	Parker County	10	Primary Care	Partially Rural
	Campbell Clinic	15	Dental Health	Rural
	Campbell Clinic	14	Mental Health	Rural
	Parker County	14	Mental Health	Partially Rural
Tarrant	North TX Area Community Health Centers Inc.	21	Primary Care	Non-rural
	North TX Area Community Health Centers Inc.	25	Dental Health	Non-rural
	North TX Area Community Health Centers Inc.	18	Mental Health	Non-rural
	FMC - Fort Worth	12	Primary Care	Non-rural
	FMC - Carswell	12	Primary Care	Non-rural
	FMC - Fort Worth	12	Dental Health	Non-rural
	FMC - Carswell	12	Dental Health	Non-rural
	LI-MHCA - Tarrant County	13	Mental Health	Non-rural
	FMC - Fort Worth	12	Mental Health	Non-rural
	FMC - Carswell	12	Mental Health	Non-rural
Wise	LI - Wise County	13	Primary Care	Rural
	Wise County	12	Mental Health	Rural

FMC = Federal Medical Center; LI = Low Income; MHCA = Mental Health Catchment Area

Source: *HPSA Find*. (2021). U.S. Department of Health Resources and Services Administration. Retrieved November 30, 2021, from https://data.hrsa.gov/tools/shortage-area/hpsa-find

Cook Children's Patients and Facilities

In fiscal year 2020, the **Cook Children's Medical Center-Fort Worth campus**:

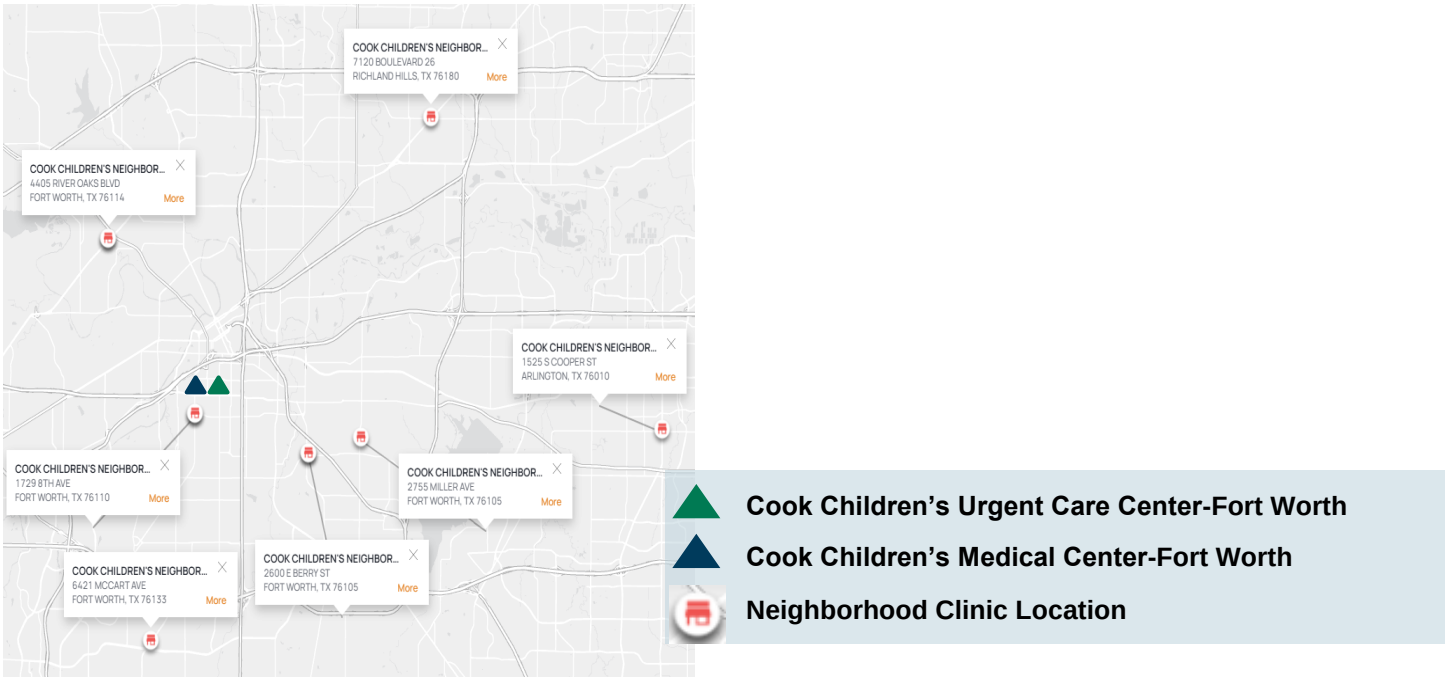
- Contained 444 licensed beds, with 401 beds staffed.
- Received 10,847 patient admissions, with an average length of stay of 7.5 days.
- Provided 3,254 ambulance transfers and 24,194 skilled home visits.
- Conducted 4,032 inpatient and 14,659 outpatient surgeries.

Cook Children's Medical Center-Prosper campus

The new Cook Children's Medical Center in Prosper, which is set to open in the fall of 2022, marks the first time in the more than 100-year history of Cook Children's that a full-service hospital has been built outside of Fort Worth. The new inpatient pediatric hospital, for which the final beam was recently placed, will open in phases. Phase I will include a 10-bed emergency room with capacity to grow to 22 rooms as needed. The pediatric intensive care unit will have 10 beds, and there will be 14 medical/surgical beds. The hospital will also have four operating rooms, three procedure rooms, an infusion center, a pharmacy and a lab. In addition, the Cook Children's Teddy Bear Transport will provide medical transport services.

System wide, Cook Children's provided 335,206 visits at Neighborhood Clinics (NHCs) and 207,955 visits at Urgent Care Centers (UCCs) in medically underserved and low-income communities during fiscal years 2018–2020. Figure 5 demonstrates these NHCs in relation to the Cook Children's Medical Center-Fort Worth campus and UCC. During fiscal years 2018–2020, Medicaid patients represented 88% of visits at NHCs and 56% at UCCs. We learned that 1 in 3 NHC patients and 1 in 10 UCC patients were Spanish speaking.

Figure 5. Access to care for medically underserved and low-income communities



Source: Cook Children's Health Care System, Healthcare Analytics. (2021). FY2018-2020: Cook Children's Visits [Number of visits to medical center and urgent care center locations].

Giving a Voice to All Children

To assess the needs of children in medically underserved and low-income communities, the Cook Children's CHNA parent and caregiver survey methodology ensured that children from families with all income levels were representative of families in the eight-county service area. The survey methodology also included oversampling in counties with lower populations and weighting the results by ZIP code to ensure that geographic distribution of the survey sample was comparable to the actual distribution of the eight-county population. With this representative sample size and the parent and caregiver survey responses, it is possible to say, for example, that "91% of children in the eight-county service area had continuous health insurance coverage in the past year." A comparison of family income levels and the race and ethnicity of survey respondents' children with U.S. census estimates is included in Appendix B, along with more details regarding the parent and caregiver survey administration process.

We also administered the survey to parents and caregivers of children (birth to age 17) **experiencing homelessness or living with an undocumented parent or caregiver** through face-to-face interviews at homeless shelters or social service organizations in Tarrant County. We received 229 responses, and these results were important to identify health equity gaps or additional needs in this population. The results were analyzed separately from the parent and caregiver survey results of the eight-county service area. Table 4 presents the income level of families completing the survey from this underserved population.

Table 4. Household income of 2021 parent and caregiver survey respondents from families experiencing homelessness or living with an undocumented family member

	Under $25,000	$25,000–$49,999	$50,000–$74,999	$75,000–$99,999	$100,00–$124,999	$125,00–$149,999	$150,000 or more	Prefer not to disclose
Underserved Population of Homeless and Undocumented Families (n=229)	78.6%	8.3%	0.4%	0%	0%	0%	0%	12.7%

The Hidden Homeless Motel Survey conducted by the Center for Transforming Lives illuminated the unique needs of an often-silent or unseen homeless population within our community. Families living in motels or other temporary housing conditions are often *permanently* living in what is only meant to be a short-term housing solution. It was vital to learn more about the challenges many families face while living in motels and hearing directly from these families themselves — rather than assuming the needs of children and families within these situations.

2021 CHNA FINDINGS

Introduction to Priority Health Issues

The sections of our 2021 CHNA findings are presented according to the priority health issues identified by our Board of Trustees. Following a summary of overall health and well-being for the eight-county service region, specific findings are presented for each priority health issue based upon the greatest number of children impacted according to our parent survey results, which is a key element of our CHNA; however, due to the deep intersectionality among health issues it is essential to note that each of these focus areas is of equal concern.

- Overall Health and Well-Being
- Oral Health
- Mental Health
- Healthy Lifestyles
- Parenting and Family Support
- Injury Prevention
- Asthma

***Important note*:** The first page within each priority health issue section is a summary brief that presents key highlights of our findings for that particular topic. For more details, please review the full section.

Geography

Within the following priority issue sections, unless otherwise noted, eight-county service area results are from our 2021 parent and caregiver survey. If applicable, survey findings are also designated by Fort Worth Service Area (FWSA) and Prosper Service Area (PSA) or may highlight results from an individual county as noted.

H.E.L.P. for Health Equity

Given that a child's health status has a profound impact on their health and well-being into adulthood, it is important to identify specific barriers to good overall health and well-being as part of this assessment. Extensive research over the years demonstrates that children thrive when they have access to nutritious food, physical activity, and preventative health care. [1] While these basics still hold true, there is also a significant body of research now to support building lifelong health by starting early, supporting safe, stable, and nurturing relationships, strengthening resiliency, and reducing sources of cumulative stress such as poverty, racism, and violence. [2]

> **Health equity** means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care." [3]

Social determinants of health (SDOHs) undermine lifelong health and are the underlying factors that contribute to health inequities, making them a primary target when working to achieve equal opportunity for good health. The CDC defines SDOHs as "the conditions in the places where people live, learn, work, and play, that affect a wide range of health and quality-of-life risks and outcomes." [4] SDOHs include healthcare access and quality; education access and quality; social and community context; economic stability; and neighborhood and built environment.[5]

Due to the deep intersectionality among health issues, particularly from the lens of a child's overall health and well-being and SDOHs, each topical section in this assessment speaks to the compounding concern of how unmet health needs, trauma and repeated stress impact a child's well-being and ability to learn, particularly for children of color or those from low-income families. To outline key findings that advance our understanding of equity gaps, the H.E.L.P. acronym (health, environment, learning and parenting) serves as a consistent framework to support child well-being. Highlighted findings from the parent survey for access to care, safety, barriers to learning, and parenting are supplemented with focus groups and community leader interviews under the **H.E.L.P. for Health Equity** sections for each topic.

H	Health	Equitable Access to Care & Basic Needs
E	Environment	Safety Where Children Live, Learn & Play
L	Learning	Readiness & Support for Academic Success
P	Parenting	Parenting & Family Support

Impact of COVID-19

The COVID-19 pandemic continues to be an unprecedented health crisis and conducting a community assessment during the midst of this crisis presented unique challenges. Starting in March 2020 with community lockdowns and social distancing, the pandemic has taken a big toll on children's physical, mental, social and emotional health. The U.S. Department of Health and Human Services recently reported a study of the initial impact of the pandemic on children and youth ages birth to 24 years served by or representative of those served by human services programs (predominately low-income). Initial impacts include: [6]

- Disruption in the early care and education services for young children and families.
- Some children and families and the programs serving them struggled to transition to virtual services.
- Food insecurity intensified as millions of children lost access to free or subsidized school lunches and healthy snacks.
- Young children experienced more emotional and behavioral problems, including depression, as a result of social isolation, disruption in routines, stress, and concerns about the health and safety of loved ones. Children ages zero to five from lower-income households, single-parent families, Black households, and young children with disabilities experienced the largest increases.
- Mental health challenges for young children increased, while access to school-based mental health services decreased.
- Risk factors of maltreatment for families increased, while opportunities for professionals to detect risk and support families decreased.

- Social service agencies curtailed in-person services and courts closed to all but essential activities. Opportunities for strengthening families as well as for reunifying children in foster care was limited.
- Youth transitioning out of foster care are particularly at risk for negative impacts due to their experiences, existing hardships, and structural barriers.
- Educational plans, current labor market participation, and future employment expectations were negatively impacted for youth and college students.[6]

To capture the local impact of these conditions caused by the pandemic, questions were included on the parent and community leader surveys and also within qualitative interviews with leaders and service providers (see Methodology section). In addition to our local 2021 findings for the eight-county service area, comparative results from national and state level data sets are included in each topical section for both pre-pandemic (2019) and during-pandemic (2020) to aid in the analysis of the early impact on our local children and to help identify community conditions for priority action.

Healthy People 2030

In its now fifth iteration, Healthy People 2030 objectives help provide a common purpose across the nation for those working to improve health and well-being within the community and public health sectors.[7] To support community action, the end of each health issue section includes selected Healthy People 2030 objectives that align with the findings and collaboration opportunities presented in this assessment.

Introduction References

[1] Centers for Disease Control and Prevention. (2022, January 1). *Children (Ages 4–11) - Raising Healthy Children*. https://www.cdc.gov/parents/children/healthy_children.html

[2] Center on the Developing Child at Harvard University (2021). *Three Principles to Improve Outcomes for Children and Families*, 2021 Update. http://www.developingchild.harvard.edu

[3] Braveman, P., Arkin, E., Orleans, T., & Plough, A. (2017, May 1). *What is Health Equity?* Robert Wood Johnson Foundation. Retrieved March 15, 2022, from https://www.rwjf.org/en/library/research/2017/05/what-is-health-equity-.html

[4] Centers for Disease Control and Prevention. (2019, December 19). *Social Determinants of Health*. Retrieved March 28, 2022, from https://www.cdc.gov/nchhstp/socialdeterminants/index.html

[5] Centers for Disease Control and Prevention. (2021, March 10). *About Social Determinants of Health (SDOH)*. Retrieved March 1, 2022, from https://www.cdc.gov/socialdeterminants/about.html

[6] Jones, K. (2021, September 21). *The Initial Impact of COVID-19 on Children and Youth (Birth to 24 years)*. U.S. Department of Health and Human Services. Retrieved March 28, 2022, from https://aspe.hhs.gov/reports/impact-covid-19-children-youth

[7] U.S. Department of Health and Human Services. (2020). *Healthy People 2030*. Retrieved April 4, 2022, from https://health.gov/healthypeople

OVERALL HEALTH AND WELL-BEING BRIEF

Most children in the eight-county service area are healthy, with parents reporting **excellent or very good health status** for 88% of children. The 2021 rate for children with excellent or very good health remains consistent with health status rates collected in 2015 and 2018. Regrettably, **1 in 8 local children** (12%) does not enjoy the benefits of excellent health; this represents approximately **147,450 children** in the service area.

In the eight-county service region **88% of children receive preventative care**, compared to 81% statewide and 83% nationally, and a large majority (97%) of children in the eight-county service area are up-to-date on vaccinations for their age. However, more than **1 in 4 children (28%) did not receive all medical care needed** in the prior year (an estimated 353,000 children). The local rate of forgone medical, dental and mental health care is higher than national and state estimates prior to and during the pandemic.

88%	90%	90%
8-County Service Area, 2021	State of Texas, 2019*	U.S., 2019*

PERCENTAGE OF CHILDREN WITH EXCELLENT OR VERY GOOD HEALTH STATUS*

H.E.L.P. for Health Equity

H	Health	**Equitable Access to Care & Basic Needs** A majority of the children in the eight-county service area had continuous **insurance coverage** for the prior year (91%), but 4% (53,780 children) had a gap in coverage during the year and 5% (56,780 children) are currently uninsured.
E	Environment	**Safety Where Children Live, Learn & Play** Many children live in motels, cars or overcrowded homes because **affordable housing is not available**. Families reported that these living conditions may continue for six months or longer.
L	Learning	**Readiness & Support for Academic Success** About 71% of children ages 3–5 in the eight-county service area are **developmentally ready to be in school**; but 10% of **children ages 3–17** have a **developmental delay**, 5% have an **intellectual delay** and 13% have a **learning disability.** These rates are higher than national and state estimates prior to and during the pandemic.
P	Parenting	**Parenting & Family Support** In order for children to receive timely health care, parents and families need supportive services to address social determinants of health. Leaders reported that poverty and geography make it difficult for some children to access needed health care and proper nutrition, which may be exacerbated by housing instability and food insecurity related to job loss. An estimated **303,000 children (nearly 1 in 4 children)** live in households that **could not always afford nutritious foods**. Inadequate insurance coverage, geography, and poverty also impact the ability to obtain preventative care.

For more information, please see the Methodology or full Overall Health section, or visit our CHNA dashboard.
Unless otherwise noted on this brief, all oral health references are noted in the full Overall Health and Well-being Data Review.
*2019 National Survey of Children's Health

OVERALL HEALTH AND WELL-BEING REVIEW

Eight in 10 children in our eight-county service area have excellent or very good health.

Percentage of children who have excellent or very good health status*

Benchmarks[1]	U.S.	Pre-pandemic (2019): **90%**
	Texas	Pre-pandemic (2019): **90%**
Service Areas[2] (2021)	8-County Service Area	88%
	FWSA // 6-County	88%
	PSA // 3-County	90%
Individual Counties[2] (2021)	Collin	91%
	Denton	90%
	Grayson	86%
	Hood	90%
	Johnson	90%
	Parker	87%
	Tarrant	86%
	Wise	85%

*Response options: Excellent, Very Good, Good, Fair, or Poor

Overview

Basics of overall health and well-being. Thankfully, most children in the eight-county service area are healthy, with parents reporting **excellent or very good health status for 88%** of children.[2] It is interesting to note that the 2021 rate for children with excellent or very good health remains consistent with health status rates collected in 2015 and 2018. Regrettably, **1 in 8 local children** (12%) does not enjoy the benefits of excellent health; this represents approximately **147,450 children** in the service area.[2] Additionally, approximately 228,010 children (18%) in the eight-county service area have specialized health care needs for situations such as heart conditions, kidney disease, Autism, anxiety, depression, asthma, diabetes, etc.[2]

One reason that most local children are healthy is that they receive preventative care. In the eight-county service region **88% of children receive preventative care**, compared to 81% statewide and 83% nationally.[1,2] Rates across counties, race and ethnicity, and child's age were comparable, with the exception of children living in a homeless shelter or with an undocumented family member (83%), Hispanic children (85%) and children in households with income less than $50,000 (85%). Even the lowest local rates exceeded state and national numbers.

Up-to-date vaccinations protect children from deadly diseases such as polio, tetanus, and diphtheria, and they are also important to keeping other children safe because dangerous diseases are decreased or eliminated. A large majority (97%) of **children in the eight-county service area are up-to-date on vaccinations** for their age according to their caregiver. This rate is lower for children living in a homeless shelter or with an undocumented family at 89%, but rates across counties, race and ethnicity, age and income all had rates comparable to the regional rate (94%–100%).

Parents and caregivers in the eight-county service area were asked if they **have one or more persons that they think of as their child's personal doctor or nurse**. A majority of parents and caregivers do have one or more personal health care providers (77%) that they turn to when health care advice or care is needed, and this rate doesn't vary widely among populations.[2] However, this percentage **decreased 19%** from the rates collected in the 2018 and 2015 CHNAs (both 96%). Across counties, the 2021 number varies between 73% (Grayson) to 80% (Johnson); and among children of a different race or ethnicity, the rate varies from 72% (Hispanic) to 80% (White, Non-Hispanic). Children living in a homeless shelter or with an undocumented family member are least likely to have a personal health care provider (70%). For the various income categories, the rate varies from 75%–81%.

Parents and caregivers in the eight-county service area **usually take their child to the doctor's office first when he or she is sick** (92%). Rates were comparable across counties and age groups, but children living in a homeless shelter or with an undocumented family were least likely to visit the doctor's office first when sick (64%), and children in households with income less than $50,000 also had a lower rate (85%). A small percentage of parents (2%) in the eight-county service area use the emergency department as their first stop for sick-child care, with children living in a homeless shelter or with an undocumented family member being 10 times more likely to visit the emergency department first when sick (20%). Children in households with income less than $50,000 also had a higher rate (7%).

Just **more than half** of children in the eight-county region (52%) **saw a healthcare provider in the previous year for sick-child care**. The rate is somewhat higher at 57%–62% in counties designated as rural (Grayson, Parker, Wise) and Urban/Rural (Hood/Johnson) counties. Children ages 0–5 years have a higher rate (58%), but Asian and Black, Non-Hispanic children are less likely to have a sick visit (38%–45%). Income does not appear to impact the rate of sick-child visits.

Only **7% of children** in the eight-county service area **saw a health care provider for hospitalization**. This rate was higher at 10% for children living in households with income below $50,000 and at 9% for children ages 0–5. The hospitalization rate for children living in a homeless shelter or with an undocumented family member was more than 2.5 times higher at 19%.

A child's health is an important component of **school attendance and success**. Half of children ages 6–17 in the eight-county service area (51%) missed one or more days of school due to physical illness. Children living in Hood, Grayson, Johnson, Parker and Wise counties had higher rates (61%–71%). Asian and Black Non-Hispanic children had the lowest rates of missed school (33%–41%). Age and household income did not significantly impact the number of children who missed school due to physical illness. Rates of missed school due to mental/emotional concerns, dental pain, injury and asthma are included in the sections specific to those conditions.

About 71% of children ages 3–5 in the eight-county service area are **ready to be in school** according to parent perception of his or her developmental growth and skills (Table 5). This is slightly lower than national (75%) and statewide (80%) rates. Grayson county children at 81% are more likely to be ready for school than children living in other counties. Children living in Parker county were less likely to be ready for school at 59%.

Table 5. School readiness of children ages 3–5 by service area[1,2]

How confident are you that this child is ready to be in school? By 'ready,' we mean his or her developmental growth and skills.	Completely Confident
Pre-pandemic US	75%
Pre-pandemic TX	80%
8-County Service Area	71%
FWSA // 6-County	71%
PSA // 3-County	70%
Homeless or Undocumented	72%
By County	
Collin	69%
Denton	68%
Grayson	81%
Hood	69%
Johnson	76%
Parker	59%
Tarrant	71%
Wise	70%

Green shading corresponds to description of rates presented in the paragraph above table.

Developmental delays and disabilities. The CDC states that monitoring children's development is important to understanding each individual child's development and behavior.[3] Development milestones are behaviors and abilities most children can do by a certain age, such as taking a first step, smiling for the first time, etc. How children play, learn, speak, act and move helps them reach developmental milestones for their age. Reaching milestones is an early indication that a child may be advanced compared to other children his or her age, and not reaching milestones is an early indication that a child may have a developmental delay. Addressing developmental delays early increases the likelihood that efforts to address them will be successful.[3]

The American Academy of Pediatrics created a universal system of developmental surveillance and screening to help medical providers identify conditions early that may affect early and long-term development and achievement. Monitoring these conditions is supported at every health supervision visit and any concerns should be followed by standardized developmental screening resting or direct referrals to intervention and medical care, if needed. Tracking these milestones is one of the reasons why well-child visits and maintaining a medical home or so important.[4]

In addition to identifying developmental delays early, understanding what to expect from children at various ages is important for reducing the frustration of parents and caregivers, which in turn reduces the likelihood of escalation into emotional or physical abuse. Since these milestones change as the child grows, it is important for parents to have support for learning how to identify and track them, and the tools available to make this process easier (e.g., CDC Learn the Signs. Act Early. Milestone Tracker application).[5] Once developmental delays, intellectual delays, or learning disabilities have been identified, parents can also benefit from understanding these conditions and how to manage the challenges, and to have emotional support for parenting and other resilience factors that increase their ability to cope.

Parents in the eight-county service area were asked if an educator, doctor or other health care provider had ever told them their child has a developmental delay, intellectual disability or learning disability. As shown in Table 6, the percentage of children ages 3–17 in the eight-county service area with a developmental delay (10%), intellectual delay (5%) or learning disability (13%) is higher than national and state estimates prior to and during the pandemic. Children living in a homeless shelter or with an undocumented family member are less likely to have been diagnosed with one of these conditions. Black, Non-Hispanic children have the highest diagnosis rate for all three conditions when compared to children of other races and ethnicities. In the income category, children living in households with less than $50,000 annual income have higher rates than children in higher income households. As might be expected, younger children are less likely to be diagnosed than school-age children.

Table 6. Delay and disabilities of children ages 3–17 by service area, race/ethnicity and income level[1]

	Ever told has developmental delay	Ever told has intellectual disability	Ever told has learning disability
Pre-pandemic (2019) **US**	7%	1%	7%
Pre-pandemic (2019) **TX**	7%	Sample size too small	8%
During Pandemic (2020) **US**	8%	2%	8%
During Pandemic (2020) **TX**	6%	2%	9%
8-County Service Area	10%	5%	13%
FWSA // 6-County	11%	5%	13%
PSA // 3-County	8%	4%	12%
Homeless or Undocumented	8%	7%	12%

Table continued on next page

	Ever told has developmental delay	Ever told has intellectual disability	Ever told has learning disability
By Race/Ethnicity			
Hispanic	10%	4%	12%
White, Non-Hispanic	9%	4%	14%
Black, Non-Hispanic	15%	9%	15%
Asian, Non-Hispanic	6%	4%	8%
Other/Multi-race, Non-Hispanic*	13%	8%	13%
By Income			
<$25,000–$49,999	14%	7%	18%
$50,000–$99,999	11%	5%	14%
$100,000–$149,999	9%	4%	13%
>$150,000	4%	1%	7%
By Age groups			
Ages 3–5	15%	5%	5%
Ages 6–17	9%	4%	15%

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey
Green shading corresponds to description of rates presented in the paragraph above table.

> Parent from Focus Group
> For young children, it's so important for their emotional skills and their social skills to be around other kids so that they can naturally develop and especially with language. So I think that there were some detriments to sheltering in place for a year — lost out on that natural growth in a year."

The impact of COVID-19 on overall health and well-being. Parents who were unable to get all the needed medical and dental care their child needed in the previous year cited the COVID-19 pandemic as the number one reason. Parents interviewed cited fears that a child would need immediate health care attention while care was unavailable. Community leaders in the service area had similar concerns about the pandemic's negative impact, citing **child mental health** (96%), **education** (93%), **safety** in the home (87%), **physical health** (76%) and **dental health** (66%). Leaders interviewed also reported that poverty and geography make it difficult for some children to access needed health care and proper nutrition, which may be exacerbated by housing instability and food insecurity related to job loss.

At the highest estimate during the pandemic (January 2021), housing instability is evident with 53% of adults in the Dallas–Fort Worth (DFW) metro area having a high likelihood of eviction or foreclosure.[6] As we consider the impact of housing instability on a child's health, homeless families residing in shelters often come to mind first. However, other children who are homeless do not reside in shelters and are known as the "hidden homeless." Many **children live in motels, cars or overcrowded homes because affordable housing is not available**.[7] Families reported that these living conditions may continue for six months or longer because they were not aware that they qualified for assistance, or feared going to shelters due to the COVID-19 pandemic, safety concerns or rejection due to their family size or composition. Families residing in motels during this study cited food and rental assistance as their most important needs.[7] In the leader survey, **3 in 5 leaders cited access to quality, affordable housing as a serious problem** in their communities. Leaders who work with families reported that many are living in hotels or their cars

because housing is not available. Eviction from their homes and insufficient income contributed to families without a permanent home living in motels instead of homeless shelters. Some families pooled family resources to share a motel or were sharing overcrowded homes.[7] While most lived in the motel for six months or longer, 10% lived in the motel for a year or more.[7]

At the highest estimate during the pandemic (December 2020), 18% of adults in the DFW metro area were not able to get enough food to eat.[6] Local leaders who work with families reported that many organizations increased food distribution efforts but some families experienced stigma, feeling they were judged by the community for asking for food assistance. In the eight-county service area, **an estimated 303,000 children (nearly 1 in 4 children) live in households that could not always afford nutritious foods**. Food deserts, poverty and homelessness contribute to food insecurity.[2] Food insecurity was highest among children residing in homeless shelters or living with an undocumented family member (3 in 4 children). Children in households with income below $50,000 were 18 times more likely to have food insecurity compared with higher-income families.[2]

H.E.L.P. for health equity

> Parent from Focus Group
>
> "Unfortunately, I don't have the option except to pull her out of school and to take a day off and try to get as much done as I can for her."

Access to overall health care. Parents and caregivers ranked **preventive health care services** for children as the highest need, followed by treatment for short-term illness and immunizations.[2] There were only slight variances among the different counties in the region, with several counties ranking mental health services or care for long-term illness above immunizations. Community leaders cited mental health care/counseling, child abuse/neglect prevention, and preventative care as their top health care needs for children.[2] Focus group parents discussed the need for specialists, particularly eye doctors and dentists, who accept Medicaid. Parents and community leaders also expressed concerns about access in nonurban areas, particularly if work or school was missed as a result of the commute.

In the eight-county service area **1 in 5 children did not receive a preventive well-child or dental visit** in the previous year.[2] Access to preventive care was most impacted by the pandemic, inadequate insurance coverage or geography. Families experiencing poverty, homelessness or living with an undocumented family member also have economic or language barriers to accessing preventive care.[2,7]

In the eight-county service area, more than **1 in 4 children (28%) did not receive all medical care needed in the prior year** (an estimated 353,000 children).[2] The local rate of forgone medical, dental and mental health care is **higher than national and state estimates prior to and during the pandemic** (national and state rates range from 1–3%). Families experiencing homelessness or living with an undocumented family member did not seek care or follow up on referrals for developmental screenings or mental health, fearing being reported to authorities or having children removed from their families.[2,7]

Other than the pandemic, the cost of health care is often the biggest barrier for parents in obtaining care for their children. Parents of **uninsured children** in the eight-county service area reported that the top reasons for not having coverage were a change in employment, it was unaffordable, or they had problems with the

application or renewal. A majority of the children in the eight-county service area had continuous coverage for the prior year (91%), but 4% (53,780 children) had a gap in coverage during the year and 5% (56,780 children) are currently uninsured (Table 7). These rates are consistent with prior assessment years (2015 and 2018). Children experiencing homelessness or living with an undocumented family member are less likely than any other population to have had continuous coverage (77%); and they are more likely to have a gap in coverage (8%) or be currently uninsured (16%).

> Parent from Focus Group
> Well, you have to reapply for Medicaid every year. And I worry every year that he would not have health insurance. And one time he was sick or whatever, but they denied his health insurance and actually cut them off. And the process to get him back on was very challenging and very upsetting."

Table 7. Insurance coverage for children by service area, race/ethnicity and income level[1]

	Continuous insurance	Gap in coverage	Currently uninsured
Pre-pandemic US	91%	3%	5%
Pre-pandemic TX	86%	5%	9%
8-County Service Area	91%	4%	5%
FWSA // 6-County	91%	4%	5%
PSA // 3-County	93%	4%	3%
Homeless or Undocumented	77%	8%	16%
By County			
Collin	93%	3%	4%
Denton	93%	4%	3%
Grayson	91%	4%	6%
Hood	95%	2%	3%
Johnson	91%	4%	5%
Parker	90%	3%	7%
Tarrant	90%	5%	5%
Wise	85%	8%	7%
By Race/Ethnicity			
Hispanic	86%	6%	8%
White, Non-Hispanic	93%	3%	4%
Black, Non-Hispanic	92%	4%	4%
Asian, Non-Hispanic	90%	5%	4%
Other, Non-Hispanic*	91%	5%	3%
By Income			
<$25,000–$49,999	84%	8%	8%
$50,000–$99,999	88%	6%	6%
$100,000–$149,999	97%	1%	2%
>$150,000	97%	1%	2%

Green shading corresponds to description of rates presented in the paragraph above table or the highest percentage of gaps in coverage or uninsured children among individual counties, race and ethnicity categories, and income levels.

In addition to lack of insurance coverage, parents report that locating providers who accept specific insurance can also influence access to care, particularly in finding nearby health care providers accepting Medicaid. Focus group parents have difficulty finding specialists, navigating the Medicaid system, addressing language barriers and reapplying for Medicaid annually.

Disparities in overall health care. Quality services are the goal for health care once children are able to access it. According to the American Academy of Pediatrics, a family-centered care approach means that families become active partners in their child's care. Research shows that active parent participation – including learning, asking questions and providing input – lead to better health outcomes and improve the overall quality of care and safety for the child.[8]

> Parent from Focus Group
> I always tell people they need a great relationship with their pediatrician, because they're just such a wealth of information and they know your kid. If you don't love [the provider], you need to find another one because they need to be someone you want to call and you go see because you trust them, and you need to trust them."

In the eight-county service area, slightly more than half of local children (53%) always experienced family-centered care according to the five metrics summarized in Table 8. In the FWSA, the rate is 54% and in the PSA the rate is 51%. Children in urban/rural counties (58%) are more likely to always receive family-centered care than children in or rural (56%) or mostly urban (51%). However, there are disparities in the likelihood that some children will always receive family-centered care:

- Children who are homeless or living in households with an undocumented family member (36%) have the lowest rate of always receiving family-centered care.
- Children in households with income under $50,000 (43%) are less likely to always receive family-centered care than children in higher income households.
- Children of color (43%–51%) are less likely to always receive family-centered care compared to Non-Hispanic, White children (58%) and all children across the eight-county region (53%).

Table 8. Family-centered care* experience for children birth to age 17 by service area, special population, race/ethnicity and income (birth to age 17)[2]

	According to parent or caregiver, the child's doctors or health care providers ALWAYS…					
	Spend enough time with child	Listen carefully to caregiver	Show sensitivity to family's values and customs	Provide specific information needed for child	Help caregiver feel like a partner in child's care	For All 5 metrics
Pre-pandemic (2019) US	60%	71%	72%	73%	73%	45%
Pre-pandemic (2019) TX	59%	73%	72%	74%	74%	43%
During Pandemic (2020) US	64%	74%	75%	75%	75%	45%
During Pandemic (2020) TX	60%	72%	73%	75%	73%	42%
8-County Service Area	64%	70%	72%	73%	72%	53%
FWSA // 6-County	66%	72%	74%	74%	73%	54%
PSA // 3-County	64%	68%	70%	72%	70%	51%
Homeless or Undocumented	54%	55%	54%	57%	57%	36%

Table continued on next page

	According to parent or caregiver, the child's doctors or health care providers ALWAYS…					
	Spend enough time with child	Listen carefully to caregiver	Show sensitivity to family's values and customs	Provide specific information needed for child	Help caregiver feel like a partner in child's care	For All 5 metrics
By Race/Ethnicity						
Hispanic	58%	66%	69%	69%	70%	46%
White, Non-Hispanic	70%	74%	77%	76%	75%	58%
Black, Non-Hispanic	57%	67%	69%	71%	71%	45%
Asian, Non-Hispanic	51%	59%	58%	64%	58%	43%
Other, Non-Hispanic**	64%	70%	69%	71%	69%	51%
By Income						
<$25,000–$49,999	56%	64%	65%	66%	64%	43%
$50,000–$99,999	62%	68%	72%	72%	73%	51%
$100,000–$149,999	71%	77%	78%	78%	77%	60%
>$150,000	73%	77%	79%	78%	77%	62%

* Individual health care providers for the respondents to the parent survey are unknown; therefore these results do not reflect relationships with a specific provider.
**Other race: Non-Hispanic children who are not white, Black or Asian according to their caregivers. Multi-race: Non-Hispanic children of one or more races (white, Black or Asian) according to their caregivers.
Green shading corresponds to description of rates presented in the paragraph and bullets above table.

Health equity issues related to access and disparities are evident throughout this assessment and are also addressed specifically for each priority health issue in the sections that follow. A brief summary of those related to overall health and well-being are below, and additional details are available in Table 9. Parent and community education opportunities and prospective collaborative approaches to improve children's health specific to each health priority issue are also included in the sections that follow.

Children in **households with family income under $50,000** have:[2]

- Equity gaps for most protective factors, including access, parent coping and neighborhood safety.
- Lower school readiness of young children compared to children in higher income categories.

Children experiencing **homelessness or living with an undocumented parent or caregiver** are:[2]

- Less likely to have a medical home, family-centered care, preventive care, access to nutritious foods and a safe neighborhood compared to results from the eight-county service area data.
- More likely to have two or more ACEs compared the eight-county service area.

In comparing the data across **race and ethnicity** categories:[2]

- **Hispanic and Black children** are less likely to have a medical home, normal BMI and food security.
- **Children of color** are less likely to have excellent or very good health or to have received all needed care.
- **Hispanic, Black and Asian children** are less likely to always receive family-centered care.
- **White and other/multi-race* children** are more likely to have a diagnosed mental health disorder.

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey

Table 9. Overall health and protective factors (birth to age 17)[1,2]

	2019 NSCH		2021 CHNA Parent Survey	Populations With Health Equity Gaps			
According to Parent or Caregiver	**Pre-pandemic US**	**Pre-pandemic Texas**	**8-County Service Area (Local)**	**Household Income**	**Race & Ethnicity**	**Age Group**	**Homeless or Undocumented**
Child's health status is excellent or very good	90%	90%	88%	Under $50K	COC	12–17	Below US, TX & local
Has a personal doctor or nurse	72%	65%	77%	Under $50K	H; B; A	Similar	Below US, TX & local
Doctor's office is first choice for care/advice	86%	82%	92%	Under $50K	H; B	Similar	1.5x below local
Always received family-centered care	45%	43%	53%	Under $50K	H; B; A	12–17	Below US, TX & local
Insured with no gaps for past year	91%	86%	91%	Under $100K	H	0–5	Below US, TX & local
Caregiver familiar with health care	N/A	N/A	61%	Under $100K	COC	6–11	Half as likely than local
Received preventive checkup in past year	83%	81%	88%	Under $50K	H	6–17	Slightly below local
Has current asthma, but did not need ER visit due to symptoms	N/A	N/A	94%	Under $50K	H; B	0–5	Twice as likely to visit ER
No accidental injury that required ER visit	N/A	N/A	88%	Similar	A; W	0–5; 12–17	More likely to have injury
Received all needed medical care (health, dental and mental health care)	97%	95%	72%	Under $100K	COC	6–17	Less likely to receive needed care
Child's oral health status is excellent or very good (ages 1–17)	80%	82%	74%	Under $100K	B; O/M	6–17	Below US, TX & local
Received two preventive checkups in past year	80%	78%	83%	Under $100K	H; O/M	0–5	Below US, TX & local
Caregiver familiar with dental services	N/A	N/A	65%	Under $100K	H; O/M; A	0–5	Half as likely than local
Child has normal BMI (ages 10–17)	63%	63%	61%	Under $100K	H; B	N/A	Below US, TX & local
Always able to afford nutritious foods	69%	68%	76%	Under $50K	H; B	Similar	More than 2x likely to be unable to afford
Meets recommendation for daily physical activity (ages 6–17)	21%	14%	23%	Similar	H; A	12–17	Similar to local
Child's mental health is excellent or very good (ages 6–17)	N/A	N/A	73%	Under $100K	B; O/M	12–17	Similar to local
Has 1 or more of most common mental disorders*	23%	23%	31%	Under $50K	W; O/M	12–17	Similar to local
Caregiver familiar with mental health services	N/A	N/A	29%	Under $100K	A; O/M	6–11	More likely to have familiarity
Did not have difficulty getting needed mental health care	58%	42%	48%	Under $50K	W; O/M	6–11	Less likely to have difficulty
Always cares about doing well in school (age 6–17)	61%	64%	50%	Under $100K	H; B	12–17	Similar to local
Bullied by others	47%	46%	38%	Under $100K	W; O/M	6–11	More likely to be bullied than local
Missed school due to physical illness	N/A	N/A	51%	Under $100K	W	12–17	Less likely to miss
Missed school due to mental/emotional illness	N/A	N/A	14%	Under $50K	O/M	12–17	More likely to miss
Ready to learn at school (ages 3–5)	75%	81%	71%	Under $150K	H; A	N/A	Similar to local
Parent is coping very well with parenting	62%	66%	54%	Under $100K	A; O/M	12–17	Similar to local
Child does not have any ACEs	66%	63%	67%	Under $50K	B; O/M	12–17	2x more likely to have ACEs
Child lives in a safe neighborhood	64%	65%	67%	Under $50K	COC	12–17	Below US, TX & local
Caregiver familiar with 211 hotline for help and community resources	N/A	N/A	27%	$100K and up	W; A	6–17	More likely to have familiarity

COC = Children of color (Hispanic; non-Hispanic Black; non-Hispanic Asian; and non-Hispanic other/multi-race).
H = Hispanic; B = Non-Hispanic Black; A = Non-Hispanic Asian; W = Non-Hispanic white.

Overall Health and Well-Being References

[1] Child and Adolescent Health Measurement Initiative. 2019–2020 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, the Health Resources and Services Administration (HRSA), and the Maternal and Child Health Bureau (MCHB). Retrieved 10/13/2021 from www.childhealthdata.org.

[2] Community-wide Children's Health Assessment and Planning Survey (CCHAPS) (2021). Cook Children's Health Care System. Fort Worth, Texas.

[3] *Watch Me! Celebrating Milestones and Sharing Concerns*. (2021, March 15). Centers for Disease Control and Prevention. Retrieved March 28, 2022, from https://www.cdc.gov/ncbddd/watchmetraining/index.html

[4] Lipkin, P. H., Macias, M. M., Norwood, K. W., Brei, T. J., Davidson, L. F., Davis, B. E., Ellerbeck, K. A., Houtrow, A. J., Hyman, S. L., Kuo, D. Z., Noritz, G. H., Yin, L., Murphy, N. A., Levy, S. E., Weitzman, C. C., Bauer, N. S., Childers Jr, D. O., Levine, J. M., Peralta-Carcelen, A. M., . . . Voigt, R. G. (2020). Promoting Optimal Development: Identifying Infants and Young Children With Developmental Disorders Through Developmental Surveillance and Screening. *Pediatrics, 145*(1). https://doi.org/10.1542/peds.2019-3449

[5] *Milestone Tracker Mobile App*. (2021, October 4). Centers for Disease Control and Prevention. Retrieved March 31, 2022, from https://www.cdc.gov/ncbddd/actearly/milestones-app.html

[6] US Census Bureau. (2022, March 22). *Measuring Household Experiences during the Coronavirus Pandemic*. Census.Gov. Retrieved March 28, 2022, from https://www.census.gov/data/experimental-data-products/household-pulse-survey.html

[7] Center for Transforming Lives (2021). The Hidden Homeless: Early Childhood Homelessness in Tarrant County. Fort Worth, Texas.

[8] Committee on Hospital Care and Institute for Patient- and Family-Centered Care. (2012). Patient- and Family-Centered Care and the Pediatrician's Role. *Pediatrics*, *129*(2), 394–404. https://doi.org/10.1542/peds.2011-3084

ORAL HEALTH BRIEF

Child oral health is achieved through proper preventive care and prompt treatment for dental problems for both children and pregnant women. Children with untreated dental problems may have difficulty with pain, eating, self-esteem or school attendance. In more severe cases, children need emergency care, hospitalization or surgical procedures.

In the eight-county service area, **1 in 4** children ages 1–17 **does not have excellent or very good oral health** (about 313,270 children). These children have poor, fair or good condition of their teeth, as reported by their parents. Children ages 6–11, children of color, and children from low-income families are less likely to have excellent or very good oral health.

26%	**18%**	**20%**
8-County Service Area 2021	State of Texas 2019*	U.S. 2019*

PERCENTAGE OF CHILDREN WITHOUT EXCELLENT OR VERY GOOD CONDITION OF TEETH

H.E.L.P. for Oral Health

H	Health	**Equitable Access to Care & Basic Needs** **One in 7** children ages 1–17 (175,000 children) did not receive all needed dental care. This rate is nearly 9 times higher than the national estimates and 5 times higher than state estimates before the pandemic. Contributing factors were the COVID-19 pandemic, inadequate insurance to cover costs, and limited services in a family's area. **One in 6** children (206,000 children) did not have a preventive dental visit, which was most common with children 5 years or younger, children of color, or children from low-income families.
E	Environment	**Safety Where Children Live, Learn & Play** Children from **lower-income households or homeless shelters** have higher rates of poor oral health and dental problems, and are **3 times more likely** to miss school as a result of dental problems.
L	Learning	**Readiness & Support for Academic Success** **Three in 10** school-age children (257,000 children) do not have excellent or very good oral health, and these children are **twice as likely** to miss school due to dental problems.
P	Parenting	**Parenting & Family Support** Parents report the need for increased access to preventative and restorative dental care and infant and child oral health education from reliable sources.

For more information, please see the Methodology or full Oral Health section, or visit our CHNA dashboard.
Unless otherwise noted on this brief, all oral health references are noted in the full Oral Health Data Review.
*2019 National Survey of Children's Health.

ORAL HEALTH DATA REVIEW

One in 4 children in our eight-county service area does not have excellent or very good oral health.

Percentage of children ages 1–17 with good, fair or poor condition of teeth*

Benchmarks[1]	U.S.	Pre-pandemic (2019): **20%** During the pandemic (2020): **23%**
	Texas	Pre-pandemic (2019): **18%** During the pandemic (2020): **26%**
Service Areas[2] (2021)	8-County Service Area	26%
	FWSA // 6-County	26%
	PSA // 3-County	25%
Individual Counties[2] (2021)	Collin	25%
	Denton	23%
	Grayson	33%
	Hood	27%
	Johnson	29%
	Parker	26%
	Tarrant	27%
	Wise	29%

*Response options: Excellent, Very good, Good, Fair or Poor.

Overview

Oral health basics. Oral health problems are one of the **most common chronic diseases of children** in the U.S., and may cause pain and infections that lead to problems with eating, speaking, playing and learning.[3] About 1 in 5 U.S. children ages 5–11 and 1 in 7 adolescents ages 12–19 have at least one untreated decayed tooth.[4] In the eight-county service area, 1 in 7 children ages 1–17 (175,000 children) had decayed teeth or cavities in the past year, and 7% of school-age children (55,000 children) missed school due to dental problems.[2]

As shown in the table above, 1 in 4 children (about 313,270) in our eight-county service area does not have excellent or very good oral health. School-age children without excellent or very good oral health **are twice as likely to have missed school** compared with children who do have excellent or very good oral health.[2] Children without excellent or very good oral health may experience dental problems that can impact their ability to eat, speak, smile or show emotions, which in turn impacts their self-esteem, overall health, and school attendance. [3]

Serious dental issues that require hospitalization are likely to result in missed school and academic issues.[6] Cook Children's Medical Center–Fort Worth treated and released 1,100 children after visiting the emergency department for dental problems during 2017–2020; 143 children were hospitalized; and 4,440 children had a surgical procedure to treat a dental problem.[5]

Part of the reason for some children's dental problems is that parents do not have a clear understanding of the relationship between oral health and their children's overall health and the importance of preventative care. About 57% of children ages 1–17 have a caregiver who does not know that age 1 is recommended for the first dental visit (FWSA-55% and PSA-63%).[2] To prevent oral health problems, children should follow the

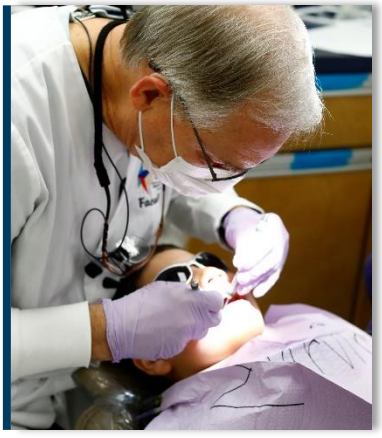
American Academy of Pediatric Dentistry recommendations to brush their teeth at least twice a day with fluoride toothpaste and to have a preventive visit with a dental professional **every six months beginning at age 1**.[6] Although most children ages 1–17 in the eight-county service area have a toothbrush and brush their teeth daily, **9% do not brush daily** (FWSA-8% and PSA-9%).[2]

Another strategy for preventing cavities in young children is to support oral health care as an important part of prenatal care. Changing hormones in pregnant women aggravate gum inflammation and can lead to gingivitis, an early stage of periodontal disease that contributes to poor health outcomes for the mother and baby.[9] Pregnant women also change other behaviors such as eating more frequently which can contribute to cavity-causing bacteria that after delivery can transmit from their mouth to the mouth of their baby. These facts lead the CDC to recommend that all health care providers consider paying more careful attention to oral health.[9]

> Parent from Focus Group
> I have three children and I did skip their preventative dental cleanings last year. We had zero dental cleanings in 2020."

Impact of COVID-19. Parents who were unable to get all the dental care their child needed in the previous year cited the pandemic as the number one reason.[2] During the early stages, dental clinics closed and dental screenings and treatment stopped. Children experienced changes in their daily routines, and this impacted eating habits and dental hygiene behaviors. Local oral health experts expressed concern that these factors negatively impacted children's oral health. Before the pandemic, they felt dental care was not necessarily a priority for some families, and this became even worse during the pandemic. Children who did not receive needed dental care or treatment could and did experience a decline in their oral health status. A parent in the focus groups reported that an untreated dental problem caused missed school and a negative impact to the child's overall health.

H.E.L.P. for health equity



Access to oral health care. Parent survey findings indicate that most children ages 1–17 in the eight-county service area do receive all needed dental care. However, more than **175,000 children (1 in 7)** were not able to get the dental care they needed in the previous year.[2] This rate is nearly **9 times higher** than the national estimates and **5 times higher** than state estimates prior to the pandemic.[1] In addition, 1 in 6 children (17%) did not receive necessary preventive dental care in the past year.[2] According to our community leader survey, 32% of leaders felt children in their communities had difficulty accessing preventive dental care.

As mentioned above, parents report that the primary reason they had difficulty getting a dental appointment was the COVID-19 pandemic. Other reasons cited by parents were inadequate insurance coverage for dental care needs, cost, and difficulty scheduling appointments. Parents also reported problems with finding dentists who treat children or accept Medicaid. They described delaying care or looking for low-cost options, such as mobile clinics or community health fairs.

Disparities in oral health. Consistent with national and state estimates, some children in the eight-county service area have worse oral health as a result of where they live, learn and play.[1,2,3,6,7,8]

Children ages 1–17 who are **homeless or living with an undocumented parent or caregiver** - or - children living in households with **family income under $100,000**[2]:

- Experience lower rates of excellent or very good oral health status and higher rates of dental problems and missed school (these children are **3 times more likely to miss school**).
- Are nearly twice as likely to have not received a preventive dental care visit or to have not received all needed dental care in the prior year.
- Are nearly twice as likely to have a caregiver who is not familiar with dental services in the community.

Children of color ages 1–17 have the highest rates of oral health deficits (see Table 10 below), including lower rates of excellent or very good oral health and higher rates of children not receiving all needed dental care.[2] This is consistent with national and state findings.[1,2]

Table 10. Oral health data of children ages 1–17 by race/ethnicity[2]

8-County Service Area	Good, Fair or Poor Oral Health	Did Not Have Recommendation from Doctor, Nurse or Medical Professional for Preventive Dental Care	Did Not Have 1 or More Preventive Dental Care Visits	Did Not Receive All Needed Dental Care in the Past Year (forgone care)
Children of all races	26%	37%	17%	15%
Hispanic	28%	34%	20%	18%
White, Non-Hispanic	23%	38%	16%	13%
Black, Non-Hispanic	36%	33%	16%	17%
Asian, Non-Hispanic	28%	32%	18%	17%
Other/Multi-race, Non-Hispanic*	32%	43%	21%	16%

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey
Green shading corresponds to description of rates presented in statement above table.

Oral health training opportunities

> Parent from Focus Group
> We waited a little bit longer and I know some other friends who didn't take their kid in until they were maybe four or something like that or whatever. That's just because that's what the recommendation is. I don't know what's right or wrong."

Health care professionals, community health workers, and other trusted sources can help improve parent and caregiver awareness to address these problems. First, it is important for parents and caregivers to know that a child's oral health has a significant impact on their overall health, including mental health. Second, preventative care is a key to maintaining good oral health and **more than half of children** in our service area have a caregiver who needs to understand that it should begin at age 1. Healthcare professionals can encourage parents by providing a recommendation for preventative dental care. Only 1 in 3 children ages 1–5 received such a recommendation from a doctor, nurse, or medical professional during a well-child visit.[2]

Parent education opportunities should focus on children of different age groups. As indicated below in Table 11, children ages 6–11 years have the highest rates of poor, fair or good oral health; less than half of 12–17 year olds received a recommendation for preventive dental care from a doctor, nurse or medical professional; and almost 1 in 3 young children ages 1–5 did not receive preventive dental care.

Table 11. Oral health data of children ages 1–17 by age group[2]

8-County Service Area	Good, Fair or Poor Oral Health	Did Not Have Recommendation from Doctor, Nurse or Medical Professional for Preventive Dental Care	Did Not Have 1 or More Preventive Dental Care Visits	Did Not Receive All Needed Dental Care in the Past Year (forgone care)
All ages	26%	39%	17%	15%
1–5 years	17%	34%	31%	14%
6–11 years	33%	31%	11%	15%
12–17 years	28%	39%	12%	15%

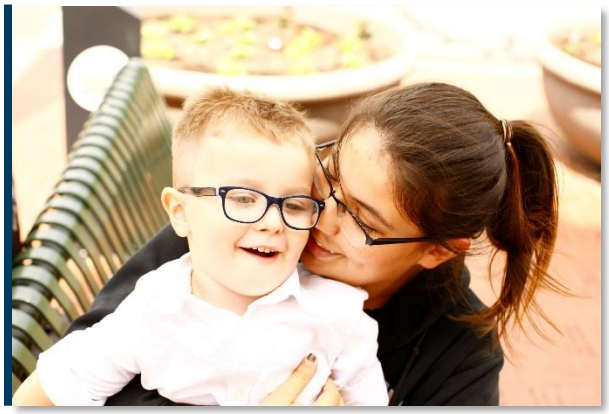
Green shading corresponds to description of rates presented in paragraph above table.

> Parent from Focus Group
>
> I feel like the only way parents really know benefits is [if] their pediatrician tells them. [And] making it more accessible [for parents] to be able to get information."

Knowledge of community resources in the eight-county service area for dental care is also important for families, especially those with disparities. **Although 2 in 3 children** ages 1–17 have a caregiver who is aware of dental services in the community, approximately 108,400 children have parents are not familiar with community resources for oral health services.[2] One parent focus group participant shared, "It starts with the parent. I work with some people [who] are very low income. And dental care is not a high priority for them or is not accessible to them. But I think education and getting good oral care [starting] with adults has the potential to roll down to the kids." Focus group parents also reported that they need reliable education for infant and child oral health since most rely on social networks for information.

Oral health collaboration opportunities

The community can support parents to ensure quality oral health awareness and education for the estimated 313, 270 children (ages 1–17) in our service area who have poor, fair, or good oral health and the 175,000 children who were unable to receive all needed dental care. Families, schools, health care providers, and advocacy groups can increase the reach and impact of evidence-informed community strategies by collaborating to:



- Improve equitable access to preventive dental care and prompt treatment, especially for children who have higher rates of oral health disease. Enlist the services of community health workers and other sources who can establish trust with families.
- Provide evidence-based education to parents and caregivers in priority populations and geographic areas, focusing on the importance of oral health to overall health, the need to seek preventative care before age 1, and how to access community resources.
- Raise awareness in the community about good oral health practices and the importance of accessing care.
- Provide evidence-based professional development for health care providers, school nurses, and community partners targeting services to populations with higher rates of oral health disease.
- Explore and address barriers to oral health care for pregnant women.
- Facilitate tracking of community-level oral health screening outcomes to monitor progress.

Healthy People 2030 objectives

- Increase the use of the oral health care system.
- Increase the proportion of youth from low-income families who have had a preventive dental visit.

Oral Health References

[1] Child and Adolescent Health Measurement Initiative. 2019–2020 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, the Health Resources and Services Administration (HRSA), and the Maternal and Child Health Bureau (MCHB). Retrieved 10/13/2021 from www.childhealthdata.org.

[2] Community-wide Children's Health Assessment and Planning Survey (CCHAPS) (2021). Cook Children's Health Care System. Fort Worth, Texas.

[3] Griffin, S. O., Wei, L., Gooch, B. F., Weno, K., & Espinoza, L. (2016). Vital signs: Dental sealant use and untreated tooth decay among U.S. school-aged children. *Morbidity and Mortality Weekly Report (MMRW), 65*(41), 1141–1145. https://doi.org/10.15585/mmwr.mm6541e1

[4] Dye, B. A., Li, X., & Beltran-Aguilar, E. D. (2012). Selected oral health indicators in the United States, 2005-2008. NCHS data brief, (96), 1–8.

[5] Cook Children's Health Care System, Healthcare Analytics. (2021).

[6] *Early preventive dental visits - AAPD*. (2014). Retrieved October 2021, from https://www.aapd.org/assets/1/7/Early_Preventive_Dental_Visits_Tech_Brief_2014.pdf

[7] Dye, B. A., Thornton-Evans, G., Li, X., & Iafolla, T. J. (2015). Dental caries and sealant prevalence in children and adolescents in the United States, 2011-2012. *NCHS Data Brief*, (191), 1–8.

[8] Jackson, S. L., Vann, W. F., Jr, Kotch, J. B., Pahel, B. T., & Lee, J. Y. (2011). Impact of poor oral health on children's school attendance and performance. *American Journal of Public Health, 101*(10), 1900–1906. https://doi.org/10.2105/AJPH.2010.200915

[9] Centers for Disease Control and Prevention. (2022, March 18). *Pregnancy and oral health feature*. Centers for Disease Control and Prevention. Retrieved March 2022, from https://www.cdc.gov/oralhealth/publications/features/pregnancy-and-oral-health.html

MENTAL HEALTH BRIEF

Mental health is essential for a child's well-being but finding and accessing the resources required to address mental health disorders in children is a common problem for parents. Mental health disorders are serious changes in the way children typically learn, behave, or handle their emotions which cause distress and problems functioning on a daily basis. Children and adolescents with mental health conditions may also participate in risky behaviors, such as substance use and self-harm. In more severe cases of mental health disorders, children may need emergency care or in-patient treatment.

The four most commonly diagnosed mental health disorders in children are attention-deficit/hyperactivity disorder (ADHD), behavior/conduct problems, anxiety and depression. **One in 3 children** ages 6–17 in our eight-county service area has a diagnosed mental health need. This represents an estimated **267,730** school-age children, and the rate in our eight-county service area is higher than state and national rates.

31%	**23%**	**23%**
8-County Service Area, 2021	State of Texas, 2019*	U.S., 2019*

PERCENTAGE OF CHILDREN WITH AT LEAST ONE DIAGNOSED MENTAL HEALTH CONDITION*

*Anxiety, depression, behavioral/conduct problems or ADHD.

H.E.L.P. for Mental Health

H	Health	**Equitable Access to Care & Basic Needs** Of the 252,000 school-age children who needed mental health treatment or counseling, 46% have a caregiver who experienced difficulty getting this care while 6% were unable to get needed care. **Barriers to care** included the pandemic, cost of care, inadequate insurance, scheduling conflicts and limited service availability in their areas.
E	Environment	**Safety Where Children Live, Learn & Play** School-age children most likely to be diagnosed with at least one of the four most common mental health disorders are children who are white; experiencing homelessness or living with an undocumented parent or caregiver; living in households with income below $50,000; or living in counties designated as mostly rural.
L	Learning	**Readiness & Support for Academic Success** Mental health disorders contribute to lower academic, behavioral, and social functioning that often continue into adulthood. Of **school-age children** in the eight-county service area, parents report that **4 in 5** are unable to stay calm and in control when faced with a challenge, nearly **2 in 5** are bullied at school, and **1 in 6** does not care about doing well in school.
P	Parenting	**Parenting & Family Support** **Nearly 7 in 10** children have a caregiver who is not very familiar with mental health services in the community.

For more information, please see the Methodology or full Mental Health section, or visit our CHNA dashboard.
Unless otherwise noted on this brief, all mental health references are noted in the full Mental Health Data Review.
*2019 National Survey of Children's Health.

MENTAL HEALTH DATA REVIEW

One in 3 school-age children in our eight-county service area has at least one of the four most commonly diagnosed mental health conditions.*

Percentage of children (ages 6–17) with at least one commonly diagnosed mental health condition*

Benchmarks[1]	U.S.	Pre-pandemic (2019): **23%**
	Texas	Pre-pandemic (2019): **23%**
Service Areas[2] (2021)	8-County Service Area	31%
	FWSA // 6-County	31%
	PSA // 3-County	30%
Individual Counties[2] (2021)	Collin	30%
	Denton	30%
	Grayson	37%
	Hood	31%
	Johnson	35%
	Parker	36%
	Tarrant	30%
	Wise	43%

*Anxiety, depression, behavioral/conduct problems or ADHD

Overview

Mental health basics. Mental health is essential for a child's well-being. Mentally healthy children have a positive quality of life, are resilient, and can function well in their homes, schools and communities. Mental health conditions or disorders are described as serious changes in the way children typically learn, behave, handle their emotions or participate in risk factors, such as substance use and self-harm.[3] The rising number of mental health disorders among U.S. children led major pediatric health organizations to recently declare child and adolescent mental health a **national emergency**.[4] And the percentage of local school-age children in our eight-county service area with at least one diagnosis of the four most common mental health disorders is **higher than national and state estimates** prior to and during the pandemic (see table above). In the eight-county service area, 31% represents an estimated 267,730 school-age children.[1,2]

The four most commonly diagnosed mental health disorders in children are attention-deficit/hyperactivity disorder (ADHD), behavior/conduct problems, anxiety (fears or worries) and depression. [5] It is not uncommon for these disorders to occur together. Behavior problems are more frequent **among children ages 6–11 years**, whereas anxiety and depression are **more common in older children**.[5] The local rates of each of the specific most common diagnoses are outlined below in Table 12.

Table 12. Mental health disorder diagnoses of school-age children ages 6–17 by service area[1,2]

According to Parent or Caregiver	Diagnosed with at least 1 of the 4 most common disorders	Ever told has ADHD	Ever told has anxiety	Ever told has depression	Ever told has behavioral/conduct problems
Pre-pandemic US	23%	11%	13%	6%	9%
Pre-pandemic TX	23%	10%	12%	9%	9%
8-County Service Area	31%	19%	19%	10%	14%
FWSA // 6-County	31%	19%	20%	11%	14%
PSA // 3-County	30%	18%	19%	10%	13%

Green shading corresponds to description of local rates presented in paragraph above table.

Undiagnosed mental health disorders. Mental health disorders are often overlooked or minimized, but children's behavior can provide signs of a potential undiagnosed mental health condition.[5–7] Signs include:

- Fear or worry that interferes with participation in school, home and play.
- Constant fatigue or sensitivity, apathy, hopelessness, sleep, or dietary changes.
- Trouble paying attention, following directions or controlling behavior.
- Disruptive actions or behaviors that interfere with school, family or general functioning.
- Problems with sleep, eating, intruding thoughts, fear or anxiety in children who have experienced trauma.

Impact of trauma on mental health. Untreated trauma in children can cause a number of problems, including behavioral issues, mood swings, depression, anxiety, self-injury, hopelessness and thoughts of suicide.[8–10] Cook Children's opened the Rees-Jones Behavioral Health Center in 2017 to provide 15 inpatient psychiatric beds for children 2–12 years old. The patients often have a complex history of trauma, medical and social needs and thoughts of hurting themselves or others.[8,10] At Cook Children's, **9 out of 10** hospitalized psychiatry patients in 2020 reported experiencing at least one form of trauma.[8,10]

Substance use and self-harm. Children and adolescents with anxiety or depression may attempt to cope by experimenting with drug use. In some cases, they may attempt self-harm or suicide with various medications. Recent deaths at Cook Children's include teens as young as 14, many of whom are linked to unintentional fentanyl overdoses. Physicians at Cook Children's Medical Center also noticed an increase in intentional over-the-counter medication overdoses. In 2020, Cook Children's physicians saw an increase of children and teens intentionally overdosing with over-the-counter medicines (aspirin, ibuprofen and acetaminophen) and other types of drugs.[8,11] Suicide attempts using over-the-counter medications has tripled among girls and young women since 2000.[11] Dr. Stacey Vanvliet shared, "Suicide attempts have become part of my daily practice, and most are overdoses on a substance that's convenient for the children and teens to grab. Commonly, we see Tylenol, Motrin, aspirin, Benadryl — things that people just stock in their cabinets to have on hand."[11] Community leaders interviewed also expressed concern about self-harm or drug use.

> "Kids are having more anxiety and depression, the ingestion numbers are higher than they've ever been, overdose is higher than it's ever been and substance abuse is higher than it's ever been. And now we have this illicit substance called fentanyl being laced into products that kids may take, not knowing it's in there." **– Artee Gandhi, M.D.**

Impact of child's sexual identity. The National Survey of Children's Health and our parent survey did not include a question for parents to identify their child's sexual identity so we are not able to analyze parent reports of the prevalence of mental health conditions among **LGBTQ+** children (Lesbian, Gay, Bisexual, Transgender, Queer or Questioning and other sexual identities). Although identifying as LGBTQ+ is not indicative of a mental health disorder, the Cook Children's psychiatry team reported 30% of admissions for

children who attempt suicide identify within the LGBTQ+ community.[12] In addition, 30% of the children assessed by the Cook Children's Behavioral Health Center reported issues with their sexual orientation or experienced gender dysphoria — a feeling of discomfort or distress that can occur when people feel their gender identity differs from their biological sex.[9,12] These children are at a high risk for mental health conditions.

> Parent from Focus Group
>
> My 16 year old has made the comment that he is in fear every time I leave that I'm not coming back. Or that when my husband leaves, he's not coming back. And I think it's made both of my children have a sense of mortality and probably some posttraumatic issues from it in my household due to it [COVID]."

Impact of COVID-19. In the eight-county service area nearly half of school-age children ages 6–17 have caregivers who are concerned that the pandemic has had a negative impact on their children's education and mental health.[2] During interviews, community leaders also observed a noticeable increase in child anxiety, depression, self-harm, suicide, substance misuse and excessive social media use. Community leaders shared examples of young children with suicidal ideations because they felt like a burden to their struggling families during the pandemic. In our community leader survey, 96% of leaders expressed concern about the negative impact of COVID-19 on the mental health of children in their communities, and parents participating in the focus groups confirmed that coping with pandemic stressors have been difficult for their children.

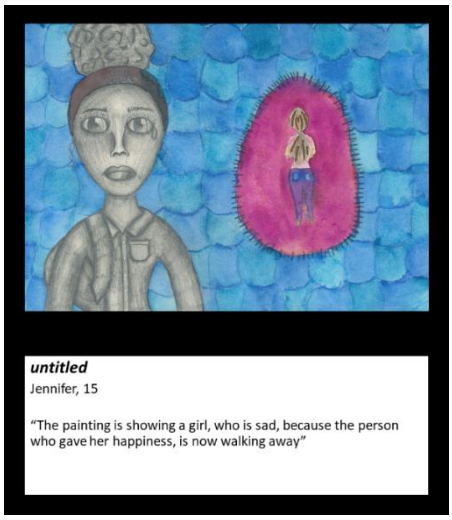
These findings align with concerning trends at Cook Children's Medical Center-Fort Worth in 2020:[8,9]

- **Suicide** surpassed child abuse and car wrecks as the **leading cause of trauma death**.
- Over 200 children were admitted for suicide attempts — double the number from 2015.
- Self-harm patients were mostly female (ages 13–15).
- Patients as young as 4 years old had thoughts of suicide.

Given the potential for emotional trauma associated with pandemic stressors, community leaders anticipate an increase in adverse childhood experiences (ACEs), such as domestic violence, abuse or drug use — they even suggested that the pandemic itself should be considered an ACE. Community leaders also expressed a concern that parents coping with the pandemic stressors through drugs, alcohol or misuse of prescription medications may increase the risk of unintentional ingestions should it be in reach of children.

H.E.L.P. for health equity

Access to mental health care. Unfortunately, low rates of treatment are evident despite high rates of mental health conditions.[13] Mental health is essential for a child's well-being but treatment for mental health disorders is historically difficult to afford and to navigate. Yet these disorders contribute to lower academic, behavioral, and social functioning that often continue into adulthood.[14] As many as 80% of the children with mental health conditions never access services and of those few who do, a large majority drop out of care before completing an effective therapeutic course.[14] This problem is intensified for children living in poverty, where children are also susceptible to higher rates of mental health disorders due to environmental factors (see data in Disparities section below).[2,15] Families contending with many stressors and obstacles are less likely to complete the full course of therapy.[14,15]



In the eight-county service area, more than **63,000 children** birth to age 17 (5%) did not receive needed mental health care in the past year.[2] This rate is **higher than the national (1%) and state (3%) estimates** prior to and during the pandemic.[1,2] Barriers cited by parents in survey responses and focus groups included the pandemic, cost of care, inadequate insurance, scheduling conflicts and limited service availability in their areas.[2] According to the our community leader survey, 68% of respondents felt children in their communities had difficulty accessing mental health care or counseling.

Disparities in mental health care. Childhood mental disorders affect many children and families of all ages and socioeconomic backgrounds. However, recent CDC findings confirm that children of color and those living in poverty are still faring worse than their peers in risk factors and prevalence of certain mental health conditions, and also in access to care.[4,15] Families experience these differences due to the scarce resources and multiple stressors evident in the communities where they live, including violence and crime.[16] Drug accessibility, unstable housing, unemployment, and food insecurity are also contributing factors.[3,15,16] Although these families experience more barriers to dealing with mental health conditions in their children — supportive relationships and environments can reduce stress and increase access to care.[16,17]

Within the eight-county service area, mental health disparities follow the same trends as national data in terms of prevalence of diagnoses and access to treatment (see Table 13 and Table 14). Key findings include[2]:

- School-age children with the **highest percentage of at least one of the four most common mental health disorders** are children who are White, Non-Hispanic; experiencing homelessness or living with an undocumented parent or caregiver; living in households with income below $50,000; or living in counties designated as mostly rural.
- School-age children in **households with income less than $50,000** are diagnosed with ADHD most often. Reviewing by race and ethnicity, rates of anxiety and depression are highest among White, Non-Hispanic and Other/Multi-race*, Non-Hispanic school-age children. Children experiencing **homelessness or living with an undocumented family member** are more likely to be diagnosed with depression and behavioral/conduct disorder.
- Of the estimated 252,000 school-age children who needed mental health treatment or counseling, **children who experienced the greatest difficulty** accessing care include those living in households with income below $50,000, who are Hispanic or Other/Multi-race, Non-Hispanic, or living in Rural counties (Grayson, Parker, Wise). Furthermore, **Asian and Other/Multi-Race*, Non-Hispanic children** have the highest percentage of those not able to get needed mental health treatment and counseling at all.[2]

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey

Table 13. Mental health disorder diagnoses of school-age children ages 6–17 by population, race/ethnicity, and income[1,2]

According to Parent or Caregiver	Diagnosed with at least 1 of the 4 most common disorders	Ever told has ADHD	Ever told has anxiety	Ever told has depression	Ever told has behavioral/conduct problems
By Population					
Pre-pandemic US	23%	11%	13%	6%	9%
Pre-pandemic TX	23%	10%	12%	9%	9%
During Pandemic US	18%	12%	12%	6%	11%
During Pandemic TX	18%	14%	10%	5%	11%
8-County Service Area	31%	19%	19%	10%	14%
FWSA // 6-County	31%	19%	20%	11%	14%
PSA // 3-County	30%	18%	19%	10%	13%
Homeless or Undocumented	34%	20%	23%	16%	21%
Mostly Urban (Collin, Denton, Tarrant)	30%	18%	18%	10%	11%
Rural (Grayson, Parker, Wise)	38%	23%	21%	13%	14%
Urban/Rural (Hood, Johnson)	35%	22%	25%	12%	14%
By Race/Ethnicity					
Hispanic	28%	17%	18%	9%	11%
White, Non-Hispanic	35%	22%	22%	12%	15%
Black, Non-Hispanic	30%	19%	14%	9%	17%
Asian, Non-Hispanic	11%	6%	7%	4%	6%
Other/Multi-race, Non-Hispanic*	34%	19%	26%	14%	13%
By Income					
<$25,000–$49,999	38%	24%	22%	15%	19%
$50,000–$99,999	31%	19%	21%	11%	14%
$100,000–$149,999	30%	21%	18%	8%	14%
>$150,000	27%	15%	18%	7%	9%

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey
Green shading corresponds to description of local rates presented in the Disparities in Mental Healthcare section above table.

Table 14. Mental health access to care for children ages 6–17 by service area, race/ethnicity and income level[1,2]

According to Parent or Caregiver	Needed mental health treatment or counseling	Experienced difficulty accessing needed care	Not possible to get needed mental health treatment or counseling
By Population			
8-County Service Area	252,310	117,010 (46%)	15,550 (6%)
FWSA // 6-County	186,280	86,680 (47%)	10,760 (6%)
PSA // 3-County	104,300	47,890 (46%)	6,720 (6%)
Homeless or Undocumented	N/A	32%	10%
Pre-pandemic **US**	N/A	39%	3%
Pre-pandemic **TX**	N/A	49%	10%
During Pandemic **US**	N/A	37%	4%
During Pandemic **TX**	N/A	49%	1%
Mostly Urban (Collin, Denton, Tarrant)	202,010	46%	6%
Rural (Grayson, Parker, Wise)	17,050	58%	5%
Urban/Rural (Hood, Johnson)	33,250	44%	7%

Table continued on next page

According to Parent or Caregiver	Needed mental health treatment or counseling	Experienced difficulty accessing needed care	Not possible to get needed mental health treatment or counseling
By Race/Ethnicity			
Hispanic	46,650	49%	3%
White, Non-Hispanic	143,250	47%	6%
Black, Non-Hispanic	25,010	38%	5%
Asian, Non-Hispanic	15,390	36%	14%
Other/Multi-race, Non-Hispanic*	20,430	54%	12%
By Income			
<$25,000–$49,999	60,960	52%	11%
$50,000–$99,999	76,860	49%	4%
$100,000–$149,999	41,220	44%	5%
>$150,000	43,100	48%	3%

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey
Green shading corresponds to description of local rates presented throughout the Disparities in Mental Healthcare section above table.

Mental health training opportunities

In today's fast-paced environment, it may be difficult for parents and caregivers to identify the signs of a mental health disorder in their child, especially when they are experiencing more stress and anxiety themselves. It is especially important for parents of adolescents to watch for anxiety and depression and understand the importance of making sure adolescents do not have access to prescription and non-prescription medications.

About one-third of the children in this eight-county service area have a diagnosed mental health condition, yet **caregivers of nearly 7 in 10 children** ages birth–17 are **not very familiar with mental health services in the community**. And the pandemic increased the number of children experiencing mental health issues while at the same time exacerbating already existing barriers to mental health care.

> Parent from Focus Group
> Where do I go, how do I get them, what's actually truly the best thing for my kid to get? Is it a guidance counselor at school? Is it a psychiatrist? Is it a mental thing? Is it actually a doctor that needs to see them? Then not knowing where to start just leads you to not start at all."

Findings from a recent research study indicate that common barriers to obtaining and completing mental health care services for children include parents' lack of knowledge about where to seek help, stigmatization associated with mental health disorders and unavailability of services.[18] In addition, **assistance for families to navigate the mental health services system of care** would increase access to care for children and help them complete the recommended therapeutic process. Research indicates that family support services to help reduce logistical barriers and address family stressors helps eliminate key barriers to accessing treatment for their children.[3,15]

Mental health collaboration strategies

Although community organizations have historically worked together to improve mental health treatment services and access to care, it is time for a broader concerted effort to address this national emergency before long-term negative outcomes occur. Recommendations for collaborative community action based on the findings of this CHNA include:

- Improve access to prompt mental health care and treatment, with a focus on services for children of color and those living in households with income below $100,000. Add family support services from trusted peer advocates to delivery of mental health care.
- Provide support to mental health providers as they work to address this crisis by reaching out to determine exactly what support they need, offering opportunities for professional development and for care coordination through networking.
- Provide parent and community training on the signs of mental health disorders in children, especially signs of anxiety and depression in adolescents and in LGBTQ+ children. Training should include information about availability of resources and overcoming barriers to care.
- Raise community awareness about the importance of treating mental health disorders, the danger of suicide in children with mental health disorders, and how to help children struggling with these conditions.
- Provide coping and resiliency skill training for children and adolescents, and increase opportunities for self-care while they wait for treatment.
- Reduce the stigma associated with mental health disorders and treatment.

Healthy People 2030 objectives

- Increase the proportion of children with mental health problems who get treatment.
- Reduce emergency department visits for nonfatal intentional self-harm injuries.

Mental Health References

[1] Child and Adolescent Health Measurement Initiative. 2019–2020 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, the Health Resources and Services Administration (HRSA), and the Maternal and Child Health Bureau (MCHB). Retrieved 10/13/2021 from www.childhealthdata.org.

[2] Community-wide Children's Health Assessment and Planning Survey (CCHAPS) (2021). Cook Children's Health Care System. Fort Worth, Texas.

[3] Centers for Disease Control and Prevention. (2021, September 23). *What is children's mental health?* Centers for Disease Control and Prevention. Retrieved October 2021, from https://www.cdc.gov/childrensmentalhealth/basics.html

[4] Shim, R., Szilagyi, M., & Perrin, J. M. (2022). Epidemic rates of child and adolescent mental health disorders require an urgent response. *Pediatrics*. https://doi.org/10.1542/peds.2022-056611. https://publications.aap.org/pediatrics/article/doi/10.1542/peds.2022-056611/184904/Epidemic-Rates-of-Child-and-Adolescent-Mental

[5] Centers for Disease Control and Prevention. (2022, March 4). *Data and statistics on children's Mental Health*. Centers for Disease Control and Prevention. Retrieved March 2022, from https://www.cdc.gov/childrensmentalhealth/data.html

[6] Centers for Disease Control and Prevention. (2021, March 22). *Anxiety and depression in children*. Centers for Disease Control and Prevention. Retrieved October 2021, from https://www.cdc.gov/childrensmentalhealth/depression.html#anxiety

[7] Centers for Disease Control and Prevention. (2021, September 28). *Learn about attention-deficit / hyperactivity disorder (ADHD)*. Centers for Disease Control and Prevention. Retrieved October 2021, from https://www.cdc.gov/ncbddd/adhd/index.html

[8] Cook Children's. (2021, May 17). *Checkup newsroom*. Now Leading Cause of Trauma Death, Child Suicides Spur New Prevention Campaign. Retrieved October 2021, from https://www.checkupnewsroom.com/now-leading-cause-of-trauma-death-child-suicides-spur-new-prevention-campaign/.

[9] Cook Children's. (2021, May 17). *Checkup newsroom*. Near Record Number of Patients Seen for Suicide Attempts in August. Retrieved October 2021, from https://www.checkupnewsroom.com/near-record-number-of-patients-seen-for-suicide-attempts-in-august/.

[10] Cook Children's. (2021, June 24). *Checkup newsroom*. Nine Out of 10 Hospitalized Psychiatry Patients at Cook Children's Have a History of Trauma. Retrieved October 2021, from https://www.checkupnewsroom.com/nine-out-of-10-hospitalized-psychiatry-patients-at-cook-childrens-have-a-history-of-trauma

[11] Cook Children's. (2021, May 17). *Checkup newsroom*. Why Locking Up Over-The-Counter Medications Can Help Prevent Youth Suicide Attempts. Retrieved October 2021, from https://www.checkupnewsroom.com/why-locking-up-over-the-counter-medications-can-help-prevent-youth-suicide-attempts

[12] Cook Children's. (2021, May 17). *Checkup newsroom*. Barriers and Stigma: Mental Health Challenges among Minority & LGBTQ+ Children. Retrieved October 2021, from https://www.checkupnewsroom.com/barriers-and-stigma-mental-health-challenges-among-minority--lgbtq-children/

[13] Bitsko, R.H., Claussen, A.H., Lichstein, J., et al. Mental Health Surveillance among Children—United States, 2013-2019. *MMWR Suppl*. 2022;71(No Suppl-2):1-42. http://dx.doi.org/10.15585/mmwr.su7102a1

[14] Bornheimer, L. A., Acri, M. C., Gopalan, G., & McKay, M. M. (2018). Barriers to Service Utilization and Child Mental Health Treatment Attendance Among Poverty-Affected Families. *Psychiatric services* (Washington, D.C.), 69(10), 1101–1104. https://doi.org/10.1176/appi.ps.201700317

[15] Hodgkinson, S., Godoy, L., Beers, L. S., & Lewin, A. (2017). Improving Mental Health Access for Low-Income Children and Families in the Primary Care Setting. *Pediatrics*, *139*(1), e20151175. https://doi.org/10.1542/peds.2015-1175

[16] Centers for Disease Control and Prevention. *Essentials for Childhood: Creating Safe, Stable, Nurturing Relationships and Environments for All Children*. Retrieved October 2021, from https://www.cdc.gov/violenceprevention/pdf/essentials-for-childhood-framework508.pdf

[17] Centers for Disease Control and Prevention. (2022, February 24). *Children's mental health: Understanding an ongoing Public Health Concern*. Centers for Disease Control and Prevention. Retrieved March 30, 2022, from https://www.cdc.gov/childrensmentalhealth/features/understanding-public-health-concern.html

[18] Hansen, A.S., Telléus, G.K., Mohr-Jensen, C. *et al.* Parent-perceived barriers to accessing services for their child's mental health problems. *Child Adolesc Psychiatry Ment Health* 15, 4 (2021). https://doi.org/10.1186/s13034-021-00357-7

HEALTHY LIFESTYLES BRIEF

Children who live a healthy lifestyle are better able to manage their weight, stress and self-esteem for lifelong health. Children who do not have a normal body weight have a greater risk of chronic disease as children and in adulthood. Obesity in childhood is associated with anxiety, depression, bullying and lower quality of life.

Nearly 2 in 5 children ages 10–17 in the eight-county service area (an estimated 223,800) do not have a normal body weight. Children need access to health care, nutritious food and opportunities for physical activity to achieve and maintain a normal, healthy body weight.

39%	37%	37%
8-County Service Area 2021	State of Texas 2019*	U.S. 2019*

PERCENTAGE OF CHILDREN (AGES 10–17) WITHOUT A NORMAL BODY MASS INDEX (BMI)-FOR-AGE

H.E.L.P. for Healthy Lifestyles

H	Health	**Equitable Access to Care & Basic Needs** The nearly 2 in 5 children (ages 10–17) who do not have a normal body weight are **less likely** than children with a normal BMI to practice **key healthy lifestyle behaviors**, such as eating the recommended amount of healthy foods, getting the recommended amount of daily physical activity, or limiting daily screen time on most days. These children are also **more likely** to miss having family meals on most days.
E	Environment	**Safety Where Children Live, Learn & Play** **Twenty-four percent** of local children ages birth–17 (303,080 children) live in households that cannot always afford to eat good, nutritious meals. Children experiencing homelessness or living with an undocumented parent or caregiver have the highest rate of food insecurity. Food insecurity is also higher for **Hispanic and Black, Non-Hispanic** children, and children living in **rural areas** or in **low-income** households. These three groups of children are also less likely to get the recommended amount of daily physical activity.
L	Learning	**Readiness & Support for Academic Success** The COVID-19 pandemic disrupted access to meals and opportunities for physical activity at school. Children who are overweight or obese are **more likely** to be teased or bullied by peers.
P	Parenting	**Parenting & Family Support** Most of the children who do not have a normal body weight have parents or caregivers who are not concerned about their children's weight.

For more information, please see the Methodology or full Healthy Lifestyles section, or visit our CHNA dashboard.
Unless otherwise noted on this brief, all healthy lifestyles references are noted in the full Healthy Lifestyles Data Review.
*2019 National Survey of Children's Health.

HEALTHY LIFESTYLES DATA REVIEW

Nearly 2 in 5 children ages 10–17 in our eight-county service area have an unhealthy body weight.

Percentage of children ages 10–17 without* a normal BMI-for-age

Benchmarks[1]	U.S.	Pre-pandemic (2019): **37%**
	Texas	Pre-pandemic (2019): **37%**
Service Areas[2] (2021)	8-County Service Area	39%
	FWSA // 6-County	40%
	PSA // 3-County	34%
Individual Counties[2] (2021)	Collin	31%
	Denton	34%
	Grayson	50%
	Hood	46%
	Johnson	43%
	Parker	38%
	Tarrant	42%
	Wise	48%

*Includes children with an underweight, overweight, or obese BMI-for-age category

Overview

Healthy lifestyles basics. Children living a healthy lifestyle are blessed with multiple health benefits, including healthy skin, teeth, and eyes; boosted immunity; strengthened bones; strong muscle development; better digestion; and good brain development.[3] Healthy lifestyles also lead to a healthy weight. Children with a **healthy weight** are likely to have good eating habits, access to nutritious foods, regular physical activity, reduced screen time and adequate sleep.[4] Recommendations for healthy nutrition include determining the right amount of fruit, vegetables, and grains to eat depending on each child's age, sex, height, weight, and level of physical activity.[5] School-age children should be physically active at least 60 minutes each day.[5,6] Children 3–5 years of age should get 11–14 hours of sleep and children 6–12 years old should get 9–12 hours.[7] A healthy lifestyle helps manage a child's weight, stress, anxiety and self-esteem.[4,6]

Children who are **overweight or obese** have a greater risk of chronic disease, cardiovascular disease, diabetes, breathing problems and joint problems. Child obesity is also associated with anxiety, depression, low self-esteem, bullying and lower self-reported quality of life.[8-11] A child's birthweight, socioeconomic status, environment and family behaviors contribute to obesity.[12] Adolescents with several adverse childhood experiences (ACEs) are more likely to be overweight or obese.[13,14]

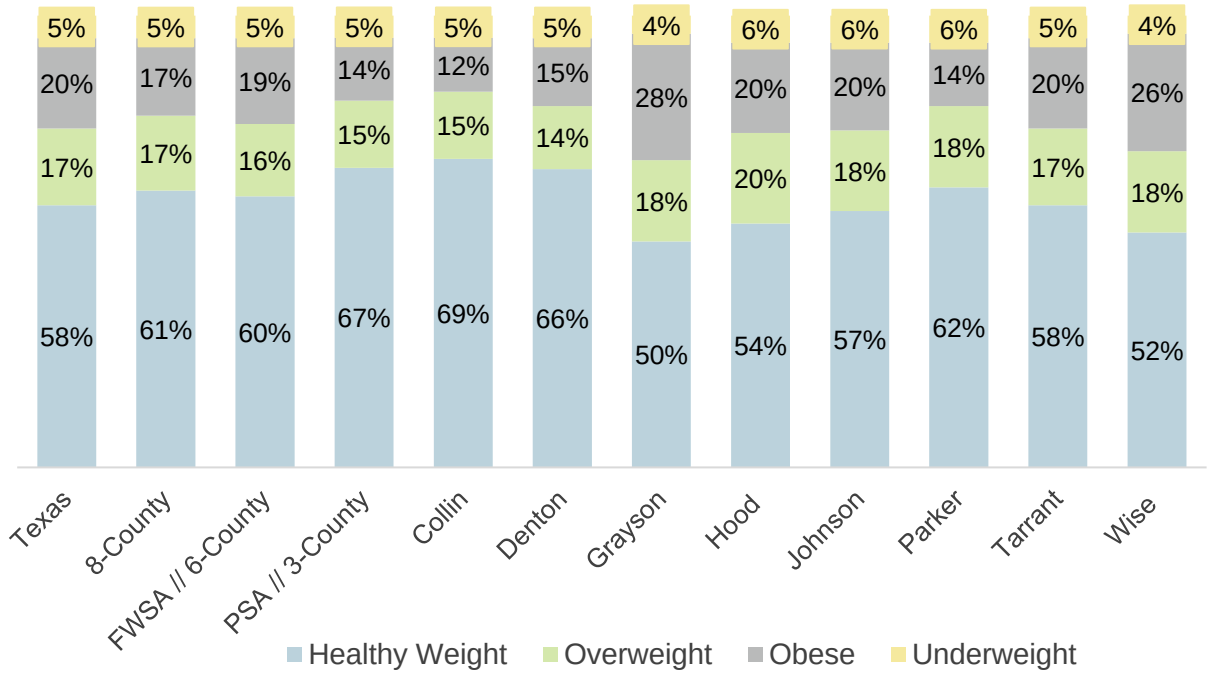
Children who are **underweight** may have undernutrition or underlying medical problems. A child's underweight status may also indicate one or more of these contributing factors: stress or neglect at home, food insecurity (lack of reliable access to enough nutritional and affordable food), poverty, chronic disease, developmental disorders, or mental illness.[15,16]

Body mass index (BMI) is commonly used to determine weight status. For children and teens, BMI is based on age, gender, height and weight.[17,18] This calculation is referred to as BMI-for-age. Findings from a national study comparing parent-reported child height and weight estimates with those physically measured indicate that parents of children under 10 years would often overestimate or underestimate their children's measurements.[18] Therefore, since findings from the National Survey of Children's Health and our parent survey are based on child height and weight as reported by caregivers, we are only reporting BMI-for-age for children 10–17 years of age. This age range is also used for National Outcome Measures and Healthy People 2030. The BMI-for-age categories for children are as follows:

- Underweight: less than the 5th percentile.
- Healthy weight: 5th percentile to less than the 85th percentile.
- Overweight: 85th percentile to less than the 95th percentile.
- Obese: equal to or greater than the 95th percentile.

In the eight-county service area, **1 in 3 children (34%) ages 10–17 is obese or overweight**. This represents approximately **194,480 children**. Although this finding is comparable with pre-pandemic national and state estimates, the rates vary by county as shown in Table 15. The percent of children who are overweight is higher in outlying rural counties with a corresponding drop in the percentage of children with healthy weight.

Table 15. BMI of children (ages 10–17)
by service area and county compared with Texas[1,2]



Children in our eight-county service area with a BMI category of overweight or obese are less likely than children with a normal BMI to practice key healthy lifestyle behaviors (see Table 16). A large majority of local children without a healthy BMI (81%) are unable to get the recommended amount of daily physical activity, and 63–70% exceed the recommended amount of daily screen time on most days. Local children who are overweight or obese are also more likely to miss having family meals on most days. Frequently eating family meals as children can prevent overweight/obesity as an adult.[19] and help families bond, build child self-esteem and establish protective factors to mitigate risk behaviors or depression.[8–11]

Table 16. Healthy lifestyle behaviors by BMI result compared for all children within the eight-county service area[2]

	Children 10–17 Years			Children 6–17 Years
According to Parent or Caregiver	Has Normal BMI	Underweight	Overweight / Obese	All in 8-County Service Area
Food assets				
Does not have more than 1 fruit on most days of the week	41%	46%	50%	40%
Does not have more than 1 vegetable most days of the week	41%	41%	47%	43%
Does not have family meals on most days	21%	20%	25%	19%
Can't always afford good, nutritious meals	19%	18%	30%	22%
Physical activity assets				
Does not get the recommended amount of daily physical activity	78%	81%	81%	77%
Screen time				
Exceeds recommended amount of daily screen time most days	68%	63%	70%	62%
Sleep				
Does not get the recommended amount of sleep most days	18%	18%	22%	16%

Green shading corresponds to description of local rates presented in paragraph above table.

Impact of COVID-19 on healthy lifestyles. Both parents and community leaders described the negative impact that the COVID-19 pandemic may ultimately have on obesity prevention and the maintenance of a healthy weight. **Three out of 4 community leaders** (76%) were concerned that COVID-19 would have an adverse impact on the physical health of children. Community leaders and parents reported **the pandemic disrupted access to food, physical activity, socialization and health care**. Leaders reported that food access was limited by school closures, given some children do not eat unless they are at school. Others stated that the pandemic exacerbated an already existing food crisis in their communities. The good news is that leaders report strong collaboration in their communities to increase food resources and distribution, and this service was highly utilized by community members.[2]

Across the country, the disruptions due to the COVID-19 pandemic accelerated weight gain, stress, irregular mealtimes, reduced access to nutritious foods, increased screen time and reduced opportunities for physical activity. Between the pre-pandemic and pandemic periods in the U.S., the rate of increase in child BMI nearly doubled.[20] Children who were overweight or obese before the pandemic have even higher rates of BMI increase. Health care providers are concerned about the increase in obesity rates due to the pandemic lockdowns. The term "covibesity" is now sometimes used to describe rapid weight gain resulting from changes in eating and physical activity.[21] As of September 2021, Cook Children's had diagnosed 91 new cases of Type 2 diabetes within the year.[21]

H.E.L.P. for health equity

Access to healthy lifestyles. Unfortunately, good nutrition and physical activity are not always available to a lot of children in the eight-county service area. Some families do not have access to healthy food or the income to afford it. The U.S. Department of Agriculture identifies food deserts by searching for low-income, low-access census tracts. Low-income census tracts have a poverty rate of at least 20% or the median family income is at most 80% of the statewide family income.[22] In low-access areas, 33% or more of residents must travel an inconvenient distance to reach the nearest supermarket or grocery store.[22] Multiple census tracts in all counties within the eight-county service area are designated as low-income/low-access.[22] This food insecurity may impact both health outcomes and academic performance.

Nearly 2 in 5 community leaders surveyed felt it was difficult for families to access wellness opportunities in their communities. While leaders believe physical activity is essential to a child's well-being, they also expressed concern for many families who are unable to afford the cost of sports or programs. They suggested that more free and accessible programs should be made available to promote physical activity and discourage risky behavior. Focus group parents also discussed a desire for more affordable opportunities. Competing priorities or work also make it difficult for parents to get their children to activities.

Twenty-four percent of children ages birth–17 (estimated 303,080 children) in the eight-county service area live in households that cannot always afford to eat good, nutritious meals.[2] Food insecurity is higher for children who fall into the overweight/obese BMI category (Table 16). Children living in **rural areas** (Grayson, Parker and Wise counties) are three times more likely than children in the eight-county region to lack physical activity assets (46% vs. 14%) such as nearby parks, sidewalks, or rec centers (Table 17). These children are also more likely to live in a household that cannot always afford to eat good, nutritious meals (31% vs. 24%); and twice as likely to lack nearby food assets (25% vs. 12%).

Children experiencing homelessness or living with an undocumented parent or caregiver have the highest rate of food insecurity (Table 17). **Low-income children** are less likely than children in higher income households to get the recommended amount of daily physical activity, to have physical activity assets, to live in a household that can always afford to eat nutritious meals, and to live in areas with nearby food assets (Table 18). In terms of race and ethnicity, **Black, Non-Hispanic children** have a higher rate of living in households that can't always afford nutritious meals. Moreover, **Hispanic and Asian, Non-Hispanic children** have the highest rate of not getting the daily recommended amount of physical activity (Table 18).

Disparities in access to healthy lifestyles. Given the disparities in access to opportunities for practicing healthy behaviors, it is no surprise that disparities occur in the rates of children without a healthy BMI. In the eight-county service area, notable disparities include (see Table 17 and 18 below):

- Children residing in rural areas (Grayson-46%; Wise-44%) have higher rates of obesity than children in the overall eight-county service area (34%) and those living in urban areas.
- Large predictors of overweight/obesity are **income and race/ethnicity**. Those with the highest rates of a BMI-for-age indicating an overweight or obesity category are children in households with income below $50,000 (44%), or who are Hispanic (45%) or Black, Non-Hispanic (44%). These **rates are also higher** than the eight-county service area (34%), state (34%) and national (31%) percentages.

Table 17. Children's access to healthy lifestyles by geography[2]

	Children 10–17 years	Children 6–17 years			
	BMI Overweight / Obese	Can't always afford to eat good, nutritious meals	No Food Assets*	Does not get recommended daily physical activity	No Physical Activity Assets*
8-County Service Area	34%	24%	12%	77%	14%
FWSA // 6-County	35%	26%	13%	77%	15%
PSA // 3-County	29%	19%	11%	78%	8%
Homeless or Undocumented	34%	70%	19%	56%	12%
By County					
Collin	27%	17%	10%	79%	5%
Denton	29%	19%	13%	78%	7%
Grayson	46%	37%	23%	65%	32%
Hood	40%	39%	26%	67%	33%
Johnson	38%	23%	22%	72%	38%
Parker	32%	24%	26%	69%	51%
Tarrant	37%	29%	8%	78%	8%
Wise	44%	37%	27%	63%	59%
Mostly Urban (Collin, Denton, Tarrant)	32%	23%	9%	79%	7%
Rural (Grayson, Parker, Wise)	39%	31%	25%	67%	46%
Urban/Rural (Hood, Johnson)	38%	24%	23%	71%	37%

Green shading corresponds to description of local rates presented throughout the Help for Health Equity section above table.

Table 18. Children's access to healthy lifestyles by race/ethnicity and income[2]

	Children 10–17 years	Children 6–17 years			
	BMI Overweight / Obese	Can't always afford to eat good, nutritious meals	No Food Assets**	Does not get recommended daily physical activity	No Physical Activity Assets**
8-County Service Area	34%	24%	12%	77%	14%
FWSA // 6-County	35%	26%	13%	77%	15%
PSA // 3-County	29%	19%	11%	78%	8%
Homeless or Undocumented	34%	70%	19%	56%	12%
By Race/Ethnicity					
Hispanic	45%	33%	10%	80%	11%
White, Non-Hispanic	31%	19%	13%	75%	17%
Black, Non-Hispanic	44%	34%	9%	78%	5%
Asian, Non-Hispanic	15%	17%	12%	81%	4%
Other/Multi-race, Non-Hispanic*	34%	33%	14%	76%	15%
By Income					
<$25,000–$49,999	44%	57%	14%	78%	17%
$50,000–$99,999	38%	29%	11%	77%	13%
$100,000–$149,999	31%	7%	13%	75%	11%
>$150,000	23%	3%	11%	76%	13%

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey.
**No Food Assets refers to parent/caregiver responding that there are no stores that sell fresh fruits and vegetables in their neighborhood; No Physical Activity Assets refers to parent/caregiver responding there are no sidewalks, parks/playgrounds, or recreation centers in their neighborhood.
Green shading corresponds to description of local rates presented throughout the Help for Health Equity section above table.

Healthy lifestyles training opportunities

One-third of the children in the eight-county service area have an overweight/obese BMI and in some populations this rate is as high as 46%. Yet **8 out of 10** (79%) of these children have parents or caregivers who are **not concerned about the child's weight**. In focus groups, parents reported they did not have much knowledge about this topic and wanted to learn more from pediatricians and schools. They only realized their children's weight was an issue when others pointed it out to them.

As noted earlier, the lifelong health of these children is at risk and they are also at risk of stigmatization. Our society devalues people who are overweight and obese, perpetuating stereotypes that individuals with weight conditions do not have willpower, and are lazy, unmotivated, or undiscplined.[23] For children and adolescents, this stigma is primarily expressed as weight-based victimization, teasing, and bullying.[23] When children are teased or bullied about their bodies, they are more likely to have low body satisfaction, low self-esteem, high depressive symptoms and suicidal attempts.[11] Of the school-age children who do not have a normal body weight in the eight-county service area, **2 in 5 are bullied**.[2]

Research indicates that there is a strong relationship between weight-based stigmatization and **increased** body weight in children.[23] Bullying and other stigmatization behaviors can result in emotional and

psychological stress; social isolation; poor academic outcomes; unhealthy eating behaviors such as binge eating; decreased exercise and physical activity; and increased body weight status.[23]

Healthy lifestyles collaboration opportunities

Most people struggle to maintain a healthy lifestyle regardless of BMI status, but for those who fall into the overweight or obese category, the consequences of not winning this battle are harsh. Parents, caregivers, providers, educators, and the general community can benefit from information and training that includes practical, actionable steps for how to achieve and maintain lifelong health in the midst of busy lifestyles, such as:

- Increase the priority for implementing strategies for healthy lifestyles training. The impact of the COVID-19 pandemic on these children is significant and parents and caregivers need support for promoting health lifestyles, which undoubtedly seems difficult to achievable much of the time.
- Provide evidence-based education for children, adolescents, parents and caregivers to increase awareness of the importance of healthy nutrition, physical activity, adequate sleep, and limited screen time. Encourage role modeling and involve parents in creating curricula and developing activities.[23] These efforts should prioritize children in low-income areas, children in rural areas, children of color, and children with ACEs.
- Increase affordable opportunities for families and individuals to participate in physical activities; include trusted peer advocates in neighborhood-based education and physical activity opportunities. Again, these efforts should prioritize children in low-income areas, children in rural areas, children of color, and children with ACEs.
- Recruit faith-based, social service, business and government community members to help maintain a community culture that promotes healthy lifestyles.
- Provide evidence-based professional development for community partners targeting services to populations with less access to healthy lifestyles.
- Provide support to physicians and mental health providers to extend their expertise to community education efforts, including educating school staff about the importance of including rules against weight-based bullying in school policies; and helping educate other providers, youth-targeted media, and the general community to learn to use appropriate language and word choices.[23]
- Increase access to behavior change counseling for children who are overweight or obese.
- Provide coping and resiliency skill training for children and adolescents who are experiencing bullying.
- Increase family awareness about community resources available for leading healthy lifestyles.
- Raise community awareness about and recruit advocates for reducing weight-based stigmatization.

Healthy People 2030 goals

- Improve health by promoting healthy eating and making nutritious foods available.
- Improve health, fitness and quality of life through regular physical activity.
- Reduce overweight and obesity by helping people eat healthy and get physical activity.

Healthy Lifestyles References

[1] Child and Adolescent Health Measurement Initiative. 2019–2020 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, the Health Resources and Services Administration (HRSA), and the Maternal and Child Health Bureau (MCHB). Retrieved 10/13/2021 from www.childhealthdata.org.

[2] Community-wide Children's Health Assessment and Planning Survey (CCHAPS) (2021). Cook Children's Health Care System. Fort Worth, Texas.

[3] Centers for Disease Control and Prevention. (2021, May 16). *Nutrition, Resources library, Benefits of healthy eating.* Centers for Disease Control and Prevention. Retrieved October 2021, from https://www.cdc.gov/nutrition/resources-publications/benefits-of-healthy-eating.html.

[4] Centers for Disease Control and Prevention. (2021, October 21). *Weight, Nutrition, and Physical Activity: Tips for Parents*. Retrieved October 2021, from https://www.cdc.gov/healthyweight/children/index.html.

[5] U.S. Department of Agriculture. (2020, December). *Executive Summary, Dietary Guidelines for Americans: 2020-2025*. Retrieved October 2021, from https://www.dietaryguidelines.gov/.

[6] U.S. Department of Health and Human Services. (2018). *Physical Activity Guidelines for Americans, 2nd edition*. Retrieved October 2021, from https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf.

[7] American Academy of Pediatrics. (2016). *Health sleep habits: How many hours does your child need?* Retrieved October 2021, from https://healthychildren.org/English/health-issues/conditions/obesity/Pages/default.aspx.

[8] Morrison, K. M., Shin, S., Tarnopolsky, M., & Taylor, V. H. (2015). Association of depression & health related quality of life with body composition in children and youth with obesity. *Journal of Affective Disorders*, *172*, 18–23. https://doi.org/10.1016/j.jad.2014.09.014.

[9] Halfon, N., Larson, K., & Slusser, W. (2013). Associations between obesity and comorbid mental health, developmental, and physical health conditions in a nationally representative sample of US children aged 10 to 17. *Academic pediatrics*, 13(1), 6–13. https://doi.org/10.1016/j.acap.2012.10.007.

[10] Beck A. R. (2016). Psychosocial Aspects of Obesity. *NASN School Nurse*, 31(1), 23–27. https://doi.org/10.1177/1942602X15619756.

[11] Eisenberg, M. E., Neumark-Sztainer, D., & Story, M. (2003). Associations of weight-based teasing and emotional well-being among adolescents. *Archives of Pediatrics & Adolescent Medicine*, 157(8), 733–738. https://doi.org/10.1001/archpedi.157.8.733.

[12] Williams, A. S., Ge, B., Petroski, G., Kruse, R. L., McElroy, J. A., & Koopman, R. J. (2018). Socioeconomic Status and Other Factors Associated with Childhood Obesity. *Journal of the American Board of Family Medicine*, 31(4), 514–521.

[13] Davis, L., Barnes, A. J., Gross, A. C., Ryder, J. R., & Shlafer, R. J. (2019). Adverse Childhood Experiences and Weight Status among Adolescents. *The Journal of Pediatrics*, 204, 71–76.e1. https://doi.org/10.1016/j.jpeds.2018.08.071.

[14] Crouch, E., Radcliff, E., Kelly, K., Merrell, M. A., & Bennett, K. J. (2022). Examining the influence of positive childhood experiences on childhood overweight and obesity using a national sample. *Preventive medicine*, 154, 106907. https://doi.org/10.1016/j.ypmed.2021.106907.

[15] Kleinman, R. E., & Greer, F. R. (2020). Malnutrition/Undernutrition/Failure to Thrive. *Pediatric Nutrition*. American Academy of Pediatrics.

[16] Homan, G.J. (2016, August 15). Failure to Thrive: A Practical Guide. *American Family Physician*. 94(4):295–9. PMID: 27548594.

[17] Centers for Disease Control and Prevention. (2021, March 17). H*ealthy weight, nutrition, and physical activity: about child and teen BMI*. Retrieved October 2021, from https://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html

[18] Akinbami, L. J., & Ogden, C. L. (2009). Childhood overweight prevalence in the United States: the impact of parent-reported height and weight. *Obesity*, 17(8), 1574–1580. https://doi.org/10.1038/oby.2009.1

[19] Berge, J. M., Wall, M., Hsueh, T. F., Fulkerson, J. A., Larson, N., & Neumark-Sztainer, D. (2015). The protective role of family meals for youth obesity: 10-year longitudinal associations. *The Journal of pediatrics*, 166(2), 296–301. https://doi.org/10.1016/j.jpeds.2014.08.030

[20] Lange, S. J., Kompaniyets, L., Freedman, D. S., Kraus, E. M., Porter, R., DNP3, Blanck, H. M., & Goodman, A. B. (2021). Longitudinal Trends in Body Mass Index before and During the COVID-19 Pandemic Among Persons Aged 2-19 Years - United States, 2018-2020. *Morbidity and Mortality Weekly Report (MMRW)*, 70(37), 1278–1283. https://doi.org/10.15585/mmwr.mm7037a3

[21] Cook Children's. (2021, September 14). *Covibesity: Rapid Weight Gain among Children and Teens Alarms Doctors*. Retrieved October 2021, from https://www.checkupnewsroom.com/covibesity-rapid-weight-gain-among-children-and-teens-alarms-doctors

[22] United States Department of Agriculture. *USDA ERS: Food Access Research Atlas*. Retrieved March 2022, from https://www.ers.usda.gov/data/fooddesert

[23] Pont, S.J., Puhl, R., Cook, S.R., and Slusser, W. (December, 2017). Stigma experienced by children and adolescents with obesity. *Pediatrics*, 140(6). American Academy of Pediatrics. Retrieved October 2021 from https://publications.aap.org/pediatrics/article/140/6/e20173034/38277/Stigma-Experienced-by-Children-and-Adolescents.

PARENTING AND FAMILY SUPPORT BRIEF

Parenting is hard and all families benefit from strong community parenting and a family support system, but families trying to navigate these challenges while experiencing adverse experiences are especially at risk for negative outcomes without parent and family support. **Adverse Childhood Experiences (ACEs)** refer to potentially traumatic events that occur in children ages 0–17 years and include experiencing or witnessing violence, abuse, or neglect in the home or community. Dozens of research studies demonstrate **a correlation between early adversity and poor outcomes later in life**. Fortunately, people who experience significant adversities are not irreparably damaged and can benefit from parent and family support.

One in 7 children has two or more ACEs in the eight-county service area (approximately 170,960 children ages 0–17). For children locally, statewide, and nationally, the most common ACE is divorce or separation, followed by home exposure to mental illness.

14%	16%	15%
8-County Service Area 2021	State of Texas 2019*	U.S. 2019*

PERCENTAGE OF CHILDREN WITH TWO OR MORE ACEs

H	Health	**Equitable Access to Care & Basic Needs** Children experiencing ACEs are at **higher risk** for chronic health problems, mental illness, and substance abuse in adulthood. Local children with two or more ACEs are less likely to have received all needed medical care or have nutritious foods.
E	Environment	**Safety Where Children Live, Learn & Play** Children experiencing **homelessness or living with an undocumented parent or caregiver** are 3 times more likely to have at least two ACEs. Rates of child abuse across the nation and locally fell or were stable in 2020 rather than increasing as expected. This unexpected outcome may illustrate the power of positive childhood experiences such as government assistance during times of financial distress, increased parent presence in the home, stronger parent and children relationships, and positive parent practices.
L	Learning	**Readiness & Support for Academic Success** Nearly 133,000 school-age children **have two or more ACEs**. Children with two or more ACEs are less likely to care about doing well in school and are more likely to have behavioral or conduct problems.
P	Parenting	**Parenting & Family Support** The vast majority of children in the service area (98%) have parents reporting that they are **coping well** (very or somewhat) with the day-to-day demands of raising children, and they have a source for emotional support with parenting (86%).

For more information, please see the Methodology or full Parenting and Family Support section, or visit our CHNA dashboard.
Unless otherwise noted on this brief, all oral health references are noted in the full Oral Health Data Review.
*2019 National Survey of Children's Health

PARENTING AND FAMILY SUPPORT DATA REVIEW

One in 7 children in our eight-county service area has two or more ACEs.

Percentage of children with two or more ACEs[2]

Benchmarks[1]	U.S.	Pre-pandemic (2019): **15%**
	Texas	Pre-pandemic (2019): **16%**
Service Areas[2] (2021)	8-County Service Area	14%
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	PSA // 3-County	12%
Individual Counties[2] (2021)	Collin	10%
	Denton	13%
	Grayson	26%
	Hood	20%
	Johnson	12%
	Parker	13%
	Tarrant	15%
	Wise	14%

Overview

Parent and family support basics. Parenting is harder now than ever before. Today's parents invest more time and money in their children, they face rapidly changing technology and the influence of social media, navigate more complex environments, and they are expected to learn and put into practice a wealth of children's health information to ensure the physical and mental health of their children. And this was all before the pandemic. Post-pandemic schedules for work, child care, and school are different, and both children and parents are functioning with a whole new level of anxiety and stress. All families benefit from a strong community parenting and family support system, but families trying to navigate these challenges while experiencing adverse experiences are especially at risk for negative outcomes without parent and family support.

Adverse Childhood Experiences (ACEs). ACEs refer to potentially traumatic events that occur in children ages 0–17 years and include experiencing or witnessing violence, abuse, or neglect in the home or community.[3] Other experiences that undermine the child's sense of safety, stability, and bonding are also included, such as substance use problems, mental health problems, or instability due to parental separation or family members being in jail or prison.[3] The definition of adversity expanded beyond these original categories and now also includes systemic causes, such as community violence, racism and chronic poverty.[4]

Dozens of research studies demonstrate **a correlation between early adversity and poor outcomes later in life**, which are triggered by biological reactions caused by excessive activation of stress response systems.[4] These cumulative reactions impact a child's developing brain, along with the immune system, metabolic regulatory systems, and the cardiovascular system. Without supportive relationships with adults to cushion the impact of ACEs over time, these experiences will likely result in excessive and long-lasting stress responses; and the more ACEs a child experiences, the more likely negative outcomes will result.[4] Poor outcomes that result from repeated stress responses may include a higher risk for chronic health problems, mental illness, and substance abuse in adulthood.[5]

Fortunately, people who experience significant adversities are not irreparably damaged.[4] ACEs can be prevented through parent education and community support, but when negative events have already occurred families can adapt and overcome them if resilience and protective factors are in place.[3] Recovery strategies can vary based on the level of trauma, and may include therapeutic interventions designed to deal with serious trauma; promoting the use of trauma-informed practices in health care, social services, and education; and offering less intensive practices such as meditation, breathing exercises, physical exercise and social supports. The ideal approach to ACEs adopts a system-level prevention strategy that reduces stress in people's lives by reducing poverty or reducing community violence and discrimination. Other important community approaches include helping parents and caregivers to develop supportive, responsive relationships to help protect their child from the effects of stress, and helping children and adults build their core life resiliency skills, such as planning, focus and self-control.[4]

For the purposes of quantifying ACEs **in this assessment, ACEs are measured based on the incidence of eight events for children**: (1) witnessing violence; (2) being a victim of violence; (3) being exposed to mental illness; (4) living with substance abuse in the home; (5) being treated unfairly because of race; or having a parent or caregiver who is (6) divorced or separated, (7) serving or has served jail time, or (8) who is deceased. These eight measures were determined and validated by the National Survey of Children's Health as the best indicators for measuring ACEs through a parent survey.[1] Within this report, findings related to ACEs from the parent survey are in reference *only* to these eight measures.

For children locally, statewide, and nationally, the most common ACE is divorce or separation, followed by home exposure to mental illness (see Table 19). In the eight-county service area, **an estimated 170,960 children (14%) have at least two ACEs**.[2] For children experiencing homelessness or living with an undocumented parent or caregiver, this rate **is three times higher**, and many of their individual ACEs are two to five times greater than national and state estimates. According to community leaders surveyed, the most concerning ACEs for children in their communities are **home exposure to substance abuse, mental illness and violence**.

Table 19. Prevalence of ACEs for children birth to age 17 by service area, special population and geography[1,2]

According to Parent or Caregiver:	Pre-pandemic U.S.	Pre-pandemic Texas	8-County Service Area	FWSA // 6-county	PSA // 3-county	Homeless or Undocumented
Has 2 or more of the listed ACEs	15%	16%	14%	14%	12%	42%
Parent or guardian divorced or separated	23%	26%	21%	22%	19%	52%
Lived with anyone who was mentally ill, suicidal or severely depressed	9%	12%	10%	10%	10%	24%
Lived with anyone who had a problem with alcohol or drugs	9%	9%	8%	8%	7%	29%
Parent or guardian served time in jail	7%	6%	6%	6%	5%	34%
Treated or judged unfairly because of race or ethnic group	5%	7%	5%	5%	5%	7%
Saw or heard parents or adults slap, hit, kick or punch one another in the home	6%	5%	4%	5%	3%	28%
Was a victim of violence or witnessed violence in his or her neighborhood	4%	4%	3%	3%	2%	17%
Parent or guardian died	3%	4%	3%	3%	2%	8%
Has none of the listed ACEs	66%	63%	67%	67%	69%	28%

Green shading corresponds to description of local rates presented in paragraph above table.

There is now compelling research to support the concept of countering the impact of ACEs through providing positive childhood experiences (PCEs) that help children grow into healthy, resilient adults.[6] Tufts Medical Center in Boston developed Healthy Outcomes from Positive Experiences (HOPE) to provide a framework and tools for communities to see and talk about experiences that support children's growth. Their four building blocks of HOPE are:[6]

- **Relationships** within the family and with other children and adults through interpersonal activities.
- **Safe, equitable, stable environments** for living, playing, and learning at home and in school.
- **Social and civic engagement** to develop a sense of belonging and connectedness.
- **Emotional growth** through playing and interacting with peers for self-awareness and self-regulation.

The HOPE key message for communities is that creating a paradigm shift in systems of care and community culture based on the power of relationships within families and communities and between those who provide and receive supportive services is key to preventing or mitigating the impact of ACEs.[6]

Findings from this assessment align with the underlying theory behind the power of PCEs to result in healthy outcomes for children. The PCEs listed below are notably lower for **children in the eight-county service area with two or more ACEs**, who are: [2]

Less Likely to have PCEs…

- Neighborhood support when help is needed
- Nutritious foods or family meals for opportunities to bond
- All needed medical care
- Safe neighborhoods
- Safe learning environments and concern about doing well in school

More Likely to have…

- Home exposure to violence, mental illness or substance abuse
- Behavioral or conduct problems
- A caregiver who is not coping well with parenting or who does not have emotional support for parenting

Impact of COVID-19 on parenting and family support. Parents in focus groups shared that they feel family deaths due to COVID-19 are potential ACEs. Community leaders also expressed concern during interviews that the COVID-19 pandemic could potentially exacerbate already existing ACEs. They shared concerns about possible increases in domestic violence, child abuse or drug use and fears that remote learning would make it difficult for schools to identify abuse and neglect, resulting in a decrease in reported cases. Leaders even suggested that the pandemic itself should be considered an ACE given disruptions in food security, housing, income and safety.

> "It's made both of my children have a sense of mortality and probably some posttraumatic issues from it in my household."

It turns out that rates of child abuse across the nation fell or were stable in 2020 rather than increasing as expected.[7,8] In one 2021 data review, child welfare reports dropped, emergency department visits declined, and hospitalizations were stable.[7] This unexpected outcome may illustrate important implications about the power of PCEs to prevent child abuse: "(1) government assistance to families in financial distress may be protective; (2) increased parent presence in the home may promote attachment; (3) parent and children may build stronger relationships by collaborating on schoolwork; and (4) positive parent practices are widespread, reducing a substantial risk factor for child physical abuse-corporal punishment."[7]

Local child abuse rates are consistent with national trends during the pandemic and with declining rates over the past decade. Child abuse rates from Texas Department of Family and Protective Services (DFPS) between 2019 and 2020 indicate that the service area experienced small decreases in total allegations in some counties (see Table 20), but the overall rate of confirmed child abuse and neglect increased only slightly from 9.10 to 9.46.[9] Two PCEs in the service region may contribute to the trends in these rates. Many local schools made considerable effort to initiate and maintain regular contact with families in response to concerns about possible increased rates of child abuse. Also, school and medical professionals in Texas are typically the top reporters of abuse and neglect, but while the number of reports made in fiscal year 2020 from these professionals decreased significantly, reports from law enforcement increased.[10] These community responses support the idea that PCEs are a powerful prevention tool.

It should be noted that multiple factors are involved in reported and confirmed child abuse cases at the local, state and national levels. Local factors that may influence high reports of allegations include the level of community awareness and resources devoted to reporting abuse and neglect.

Table 20. Child abuse and neglect allegations by county and eight-county service area (Texas Department of Family and Protective Services)[9,10]

Number of Allegations by Type 8-County Service Area	FY2019	FY2020	Trends Over Past 10 Years
Neglectful Supervision	24,250	24,055	Among the lowest numbers in past 10 years
Physical Abuse	8,954	8,391	Lowest numbers in past 10 years
Sexual Abuse	7,158	6,900	Lowest numbers in past few years
Physical Neglect	2,938	2,724	Lowest numbers in past 10 years
Emotional Abuse	1,106	1,173	Consistent with past few years
Confirmed Abuse/Neglect Investigations (Rate per 1,000 Children, Birth to Age 17)	**FY2019**	**FY2020**	**Trend From Previous Year**
8-County Service Area	9.10	9.46	Increase
Collin	5.19	4.45	Decrease
Denton	6.71	7.43	Increase
Hood	19.95	18.02	Decrease
Grayson	18.72	15.15	Decrease
Johnson	13.81	12.27	Decrease
Parker	14.50	14.92	Increase
Tarrant	10.30	11.46	Increase
Wise	13.78	14.61	Increase

It may be helpful to consider local risk factors as communities plan where potential PCEs might be most needed. The U.S. Census Bureau uses Community Resilience Estimates (CREs) to identify **geographical areas that are at high risk for difficulty enduring the pandemic** based on the proportion of population with three or more risk factors:[11]

- Low-income household;
- Single or no caregiver household;
- Lack of health insurance;
- Employment status;
- Household communication barrier;
- Physical crowding;
- Respiratory disease;
- Heart disease;
- Diabetes;
- Disability status;
- Age 65 or older.

It may be challenging for families to provide protective support to their children in areas with three or more risk factors, and families experiencing ACEs are likely to face the same or similar trials. About **18% of the total population in the eight-county service area has three or more of these CRE risk factors** (Table 21). A map of CRE areas for the region is located in Appendix D.

Table 21. Comparison of ACEs and CREs by county

Geographic area	Percent of children with 2–8 ACEs[2]	Estimated population with 3 or more CRE risk factors[10]	ZIP codes with statistically higher CRE risk factors than national estimates[10]
U.S.	15%	22%	
Texas	16%	24%	
8-County Service Area	14%	18%	
Collin	10%	14%	75069, 75070, 75071
Denton	13%	15%	None
Grayson	26%	24%	76245, 76264, 76273
Hood	20%	21%	76048, 76049
Parker	13%	20%	76086
Johnson	12%	20%	76033
Tarrant	16%	21%	Fort Worth: 76102, 76103 76104, 76105, 76106, 76107,76110, 76111, 76112, 76115, 76118, 76119, 76122, 76126, 76133, 76134, 76137, 76140 Arlington: 76010, 76011, 76012, 76013, 76016 Grand Prairie: 75051 Haltom City: 76117
Wise	14%	22%	76426, 76234

Green shading corresponds to description of local rate presented in paragraph above table.

H.E.L.P. for health equity

Access to parenting and family support. As previously mentioned, supportive relationships are important to helping parents navigate adverse experiences. Fortunately, this building block appears to be strong for local parents, even in counties with CREs. The vast majority of children 0–17 in the eight-county service region (98%) have parents reporting that they are coping well with the day-to-day demands of raising children, and they have a source for emotional support with parenting (86%) (Table 22).[2] These rates are consistent across local counties. While the ability to cope rates locally are comparable with national and state rates, **the rates for children with parents having a source of emotional support are considerably higher than national** (77%) **and statewide rates** (72%).[2]

Survey questions for parent coping and support

Question: How well do you think you are handling the day-to-day of raising children?

Response options: Very well / Somewhat well / Not very well / or Not well at all

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Question: During the past 12 months, was there someone that you could turn to for day-to-day emotional support with parenting or raising children?

Response options: Yes or No

Table 22. Parental coping and emotional support findings for children ages 0–17, eight-county service area[1,2]

	Ability to cope with parent demands?			Source of emotional support for parenting?
	Very Well	Somewhat Well	Total	Yes
Pre-pandemic US (2019)	62%	36%	98%	76%
Pre-pandemic TX (2019)	66%	32%	98%	70%
During pandemic US (2020)	60%	38%	98%	77%
During pandemic TX (2020)	65%	34%	99%	72%
8-County Service Area (2021)	54%	44%	98%	86%

Green shading corresponds to description of local rates presented in paragraph above table.

Although these findings are a key community strength, it is important to also point out that 14% of children (171,250 children) have caregivers who do not have a source of emotional support for parenting. Caregivers of children experiencing homelessness or living with an undocumented family member are less likely than other parents in the region to have a source for emotional support (66% vs. 85%).

Looking at the parent coping and support trends over several assessment years provides additional insight (Table 23). Although the total percentage of parents coping very well or somewhat well stays consistent, the ability of parents to cope very well is decreasing, while at the same time the percentage of parents with emotional support is decreasing (from 92% to 87%). However, the shift in very well responses is not alarming as changes in the rates for not very well or not well at all responses are negligible (1% in 2015 and 2% in 2018 and 2021). The shift in responses appears to reflect that while parents are still coping well, they may not be coping quite as well as before.

Table 23. Parental coping and emotional support findings for caregivers of children 0–14, 6-county service area[1,2]

"How well do you think you are handling the day-to-day demands of raising children?" Responses options: "Very well," "Somewhat well," "Not very well," and "Not well at all"			
	2015 CHNA	**2018 CHNA**	**2021 CHNA**
Very well	68%	62%	54%
Somewhat well	31%	36%	43%
"During the past 12 months, was there someone that you could turn to for day-to-day emotional support with parenting or raising children?" Response options: "Yes" or "No"			
	2015 CHNA	**2018 CHNA**	**2021 CHNA**
Yes, has emotional help with parenting	92%	90%	87%

Prior-year data for the PSA is not available, but differences among the service areas in 2021 were insignificant.

Disparities in parenting and family support. As might be expected, populations that often experience disparities have higher rates of children with 2–8 ACEs (Table 24). However, many of these children also have parents who developed parent resiliency skills and support to offset the impact. The eight-county service area rate for the percentage of children with 2–8 ACEs is comparable to national and state rates, and

the PSA (12%) rate is lower than the FWSA (14%) rate. Highlights from the data concerning families with multiple ACEs include:

- Children experiencing homelessness or living with an undocumented parent or caregiver are 3 times more likely to have at least two ACEs when compared with local, state and national estimates (42% vs. 15–16%).
- County rates range from 10% (Collin) to 26% (Grayson); Grayson and Hood rates are about 1.5 times the eight-county service area rates.
- Rates of multiple ACEs range from 6% (Asian, Non-Hispanic) to 20% (Black, Non-Hispanic) and 21% (Other/Multi-race*, Non-Hispanic).
- Children in the eight-county service area in households with family income below $50,000 have a higher rate of 2-8 ACEs (25%) than those in lower income households (5–16%).
- Rates for children of different ages range from 9% (ages 0–5) 18% (ages 12–17).

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey

Table 24. Percentage of children (birth to age 17) with 2–8 ACEs by service area, county, race/ethnicity, income and age [1,2]

2021 CHNA Parent Survey			
Pre-pandemic US (2019)	15%	**By Race/Ethnicity (8-County Service Area)**	
Pre-pandemic TX (2019)	16%	Hispanic	12%
During pandemic US (2020)	15%	White, Non-Hispanic	13%
During pandemic TX (2020)	14%	Black, Non-Hispanic	20%
8-County Service Area	14% (170,960)	Asian, Non-Hispanic	6%
FWSA // 6-County	14% (137,280)	Other/Multi-race, Non-Hispanic*	21%
PSA // 3-County	12% (62,210)		
Homeless or Undocumented	42%		
By County		**By Income (8-County Service Area)**	
Collin	10% (25,420)	<$25,000–$49,999	25%
Denton	13% (28,530)	$50,000–$99,999	16%
Grayson	26% (8,260)	$100,000–$149,999	7%
Hood	20% (2,420)	>$150,000	5%
Johnson	12% (17,060)		
Parker	13% (4,630)	**By Age Group (8-County Service Area)**	
Tarrant	15% (82,420)	0–5 years	9%
Wise	14% (2,220)	6–11 years	13%
		12–17 years	18%
		School-age (6–17 years)	15%

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey
Green shading corresponds to description of local rates presented in paragraph and bullets above table.

Parents and caregivers struggling with ACEs have also developed coping resiliency and parenting support resources. Analysis of the percentage of parents coping very well and with emotional support reveals many strengths throughout the service area (Table 25).

Table 25. Summary of parent coping and support for children (birth to age 17) by county, race/ethnicity, household income and age [1,2]

	Percentage of children with parents coping *very well*		Percentage of children with parent who *has* emotional support	
8-county Service Area	**54%**		**86%**	
	Ranges from	To	Ranges from	To
County	50% (Collin)	64% (Wise)	85% (Collin, Denton, Tarrant)	93% (Grayson)
Race/Ethnicity	42% (Asian, Non-Hispanic)	57% (Black, Non-Hispanic)	69% (Asian, Non-Hispanic)	91% (White, Non-Hispanic)
Household income	51% (Below $100,000)	60% (more than $150,000)	81% (Below $50,000)	91% (More than $150,000)
Age	50% (12–17 years)	59% (0–5 years)	84% (12–17 years)	89% (0–5 years)

Green shading corresponds to description of local rates presented in statement above table.

Parenting and Family Support Training Opportunities

Benefits and best practices. These assessment findings reflect an immense value to communities for increasing access to parent and family support programs. The Wilder Foundation conducted a literature review and summarized several key benefits for parent education:[12]

- Improves parental empowerment and competency.
- Increases positive parenting practices.
- Increases social connections.
- Improves child behavior.
- Improves parent-child interactions.
- Improves parental mental health and well-being.
- Decreases use of corporal punishment and risk of child abuse.

Another study found that parenting interventions offered during the first three years of life are effective for improving early child development outcomes, including child cognitive, language, motor, socioemotional development, and attachment and reduced behavior problems. Parenting knowledge, practices and interactions with their children also improved.[13] Access to support networks for parents of children at all ages helps provide parents with a form of self-care and build skills; reminds them they are not alone; and provides connections to community resources. Best practices for these programs identified in the Wilder literature review include: [12]

- Actively engage parents and provide opportunities for practicing the skills they learn.
- Reach parents early – serve new parents or parents of young children to set the stage for more positive experiences later in life.
- Make cultural adaptations – Adapt program elements to address the unique needs and culture traditions of the families served.

- Offer frequent sessions over several months – meet at least weekly for the best outcomes.
- Promote family routines – emphasize the importance of family roles, regular routines and family activities.
- Use skilled parent educators.

Child abuse and neglect. Data in this section and in the Mental Health section both reflect a critical need for community education to recognize and report the signs of child abuse and neglect and other forms of trauma to help connect these families to trauma-informed care and services. Education on appropriate disciplinary measures can also be helpful to some parents. Focus group and leader interview participants discussed the challenges of identifying when excessive discipline crosses the line into abuse or when disengagement becomes neglect. One community leader shared experiences at little league games when a child didn't have a parent to go to following a game or parents stayed on their phone and did not pay attention to the child, demonstrating little engagement. Parents also may not know where to go for support or how to report abuse or neglect.

> "That a lot of parents, they're doing what their parents did. And they don't understand that that was neglect. I really do think that's why so many kids are still struggling, because their parents thought they were raised right."

Other parenting concerns. Some parent survey respondents report special concerns about school-age children in the eight-county service area.[2] indicating that education on these topics may be helpful:

- **Four in 5** school-age children (80%, 675,030 children) are not always able to stay calm and in control when faced with a challenge.
- Nearly **2 in 5** school-age children (38%, 315,290 children) get bullied at school.
- Nearly **1 out of 4** school-age children (22%, 186,970 children) sometimes or always argue too much with their caregiver.
- **One in 6** children (16.7%) sometimes care or never care about doing well in school.

Parenting and family support collaboration opportunities

Providing community support for parents and caregivers should be developed and offered through an understanding lens of the difficulties and challenges many families face, especially as they recover from the pandemic. Exercising grace for parents and including them in planning and implementation efforts will add to the likelihood of eventual success and a healthier community. Incorporating the HOPE building blocks outlined in this section may also add to success and sustainability rates. Multiple organizations and partners are currently working to address parenting and family issues across the service area and the history of collaboration should serve the community well as how new resources are explored for addressing the increased needs.

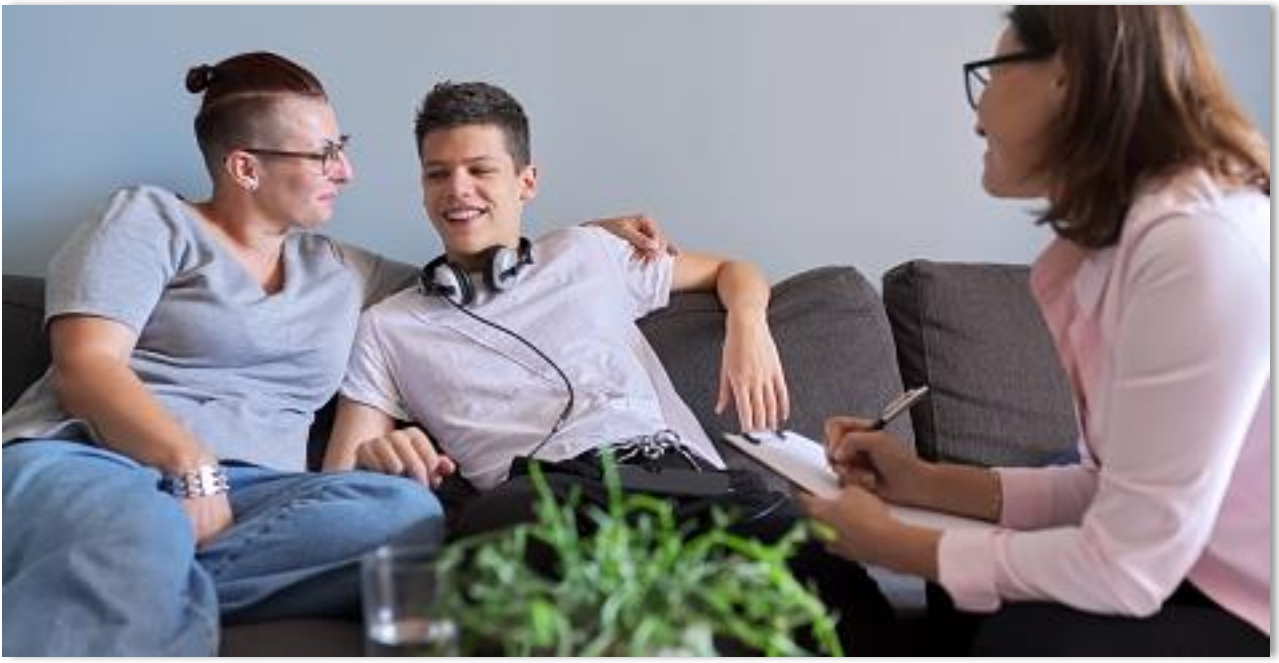
The prevalence and long-term impact of ACEs led the CDC to designate ACEs as a priority for prevention and intervention efforts. Prevention strategies recommended by the CDC include:[3]

- Strengthening economic supports to families such as reinforcing household financial security and encouraging family-friendly work policies.

- Promoting social norms that protect against violence and adversity, such as public education campaigns, legislative approaches to reduce corporal punishment, bystander approaches, and enlisting men and boys as prevention allies.
- Ensuring a strong start for children, including early childhood home visitation, high-quality and affordable child care, and preschool enrichment with family engagement.
- Provide parenting support, including teaching skills for social-emotional learning, safe dating and healthy relationships, and maintaining healthy family relationships.
- Connect youth to caring adults and activities, such as mentoring and after-school programs.
- Intervene to lessen the immediate and long-term impact of ACEs through enhancing primary care, victim-centered services, prevention and treatment approaches, and family-centered treatment for substance use disorders.

Healthy People 2030 objectives

- Increase the proportion of children and adolescents who show resilience to challenges and stress.
- Increase the proportion of children and adolescents who communicate positively with their parents.
- Reduce the number of young adults who report three or more ACEs.



Parenting and Family Support References

[1] Child and Adolescent Health Measurement Initiative. 2019–2020 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, the Health Resources and Services Administration (HRSA), and the Maternal and Child Health Bureau (MCHB). Retrieved 10/13/2021 from www.childhealthdata.org.

[2] Community-wide Children's Health Assessment and Planning Survey (CCHAPS) (2021). Cook Children's Health Care System. Fort Worth, Texas.

[3] Centers for Disease Control and Prevention (2019). *Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence.* Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

[4] *What Are ACEs? And How Do They Relate to Toxic Stress?* (2020, October 30). Center on the Developing Child at Harvard University. Retrieved March 28, 2022, from https://developingchild.harvard.edu/resources/aces-and-toxic-stress-frequently-asked-questions/

[5] *Violence Prevention, Risk and Protective Factors.* (n.d.). Centers for Disease Control and Prevention. Retrieved January 30, 2022, from https://www.cdc.gov/violenceprevention/aces/riskprotectivefactors.html

[6] Tufts Hope. (2022). Tufts HOPE – Healthy Outcomes from Positive Experiences. Retrieved March 28, 2022, from https://positiveexperience.org/

[7] Sege, R., & Stephens, A. (2021). Child physical abuse did not increase during the pandemic. *JAMA Pediatrics*.

[8] Rapp, A., Fall, G., Radomsky, A. C., & Santarossa, S. (2021). Child maltreatment during the COVID-19 pandemic: A systematic rapid review. *Pediatric Clinics, 68*(5), 991-1009.

[9] Texas Department of Family and Protective Services. (2012–2021, February 11). *Abuse/Neglect Investigations - Alleged and Confirmed Victims By County FY2012-FY2021* | Open Data Portal (CPI 3.8) [Abuse]. https://data.texas.gov/dataset/CPI-3-8-Abuse-Neglect-Investigations-Alleged-and-C/v63e-6dss

[10] Texas Department of Family and Protective Services. (2021). *Statewide Intake: Source of Abuse/Neglect Reports* [Dataset]. https://www.dfps.state.tx.us/About_DFPS/Data_Book/Statewide_Intake/Source_of_Reports.asp

[11] US Census Bureau. (2021, October 8). *Community Resilience Estimates*. Census.Gov. Retrieved January 25, 2022, from https://www.census.gov/programs-surveys/community-resilience-estimates.html

[12]Rothe, M. I., Rogers-Tanner, S., & Skypek, M. (2016, October). *The Benefits of Parenting Education: A Review of the Literature for the Wilder Parenting Education Center*. Wilder Research. https://www.wilder.org/sites/default/files/imports/LitReviewSummary_10-16.pdf

[13]Jeong, J., Franchett, E. E., Ramos de Oliveira, C. V., Rehmani, K., & Yousafzai, A. K. (2021). Parenting interventions to promote early child development in the first three years of life: A global systematic review and meta-analysis. *PLoS Medicine, 18*(5), e1003602.

INJURY PREVENTION BRIEF

Injury prevention focuses on preventing harm or death to children due to accidental or unintentional injuries. Unintentional injuries are the leading cause of death for children ages 1–17 in the U.S. and Texas. The leading cause of unintentional injury deaths varies by age group:

- **Infants**: suffocation due to unsafe sleep environments.
- **Children 1–4 years**: drowning.
- **Children 5–17 years**: motor vehicle traffic accidents.
- **Young children and teens**: unintentional poisoning and firearm injuries.

H.E.L.P. for Injury Prevention

H	Health	**Equitable Access to Care & Basic Needs** **One in 8 children** received emergency care for an accidental injury. This represents approximately **147,770 children** ages 0–17 (12%) in the eight-county service area. Aspects of injury prevention coincide with mental health — specifically self-harm, suicide, substance abuse and opioid addiction. **Nearly 9 in 10 community leaders** were concerned that the COVID-19 pandemic was having a negative impact on safety in the home.
E	Environment	**Safety Where Children Live, Learn & Play** • Nearly **2 in 5 young children do not sleep alone** in their own cribs or beds • During swim time, 7% of young children **were not within reach of an adult** and 12% were not within reach of an adult during bath time. 80% of older children do not wear a life jacket. • **1 in 5 children** is not always buckled up while in a vehicle, and rates vary by age group and decrease with older children. • **1 in 4 young children** lives in a home with medication or household cleaners that are not always safely stored away. • **10%** of young children, **20%** of 6–11 year olds and **30%** of 12–17 year olds live in a home with a **gun** that is **not always safely locked away**.
L	Learning	**Readiness & Support for Academic Success** **1 in 10 school-age children missed school** due to an accidental injury, with the highest percentage among children ages 12–17. Children experiencing **homelessness or living with an undocumented parent or caregiver** were twice as likely to have missed school due to accidental injury.
P	Parenting	**Parenting & Family Support** Parents need evidence-based education and training to increase awareness of the injury prevention measures for each stage of their child's life. Prioritize children in low-income areas, children in rural areas, and children of color.

For more information, please see the Methodology and full Injury Prevention section, or visit our CHNA dashboard.
Unless otherwise noted on this brief, all injury prevention references are noted in the full Injury Prevention Data Review.

INJURY PREVENTION DATA REVIEW

One in 8 children in our eight-county service area received emergency care for an accidental injury.

Percentage of children who received emergency care for accidental injury

Benchmarks[1]	U.S.	Pre-pandemic (2019): **N/A**
	Texas	Pre-pandemic (2019): **N/A**
Service Areas[2] (2021)	8-County Service Area	12%
	FWSA // 6-County	11%
	PSA // 3-County	15%
Individual Counties[2] (2021)	Collin	16%
	Denton	13%
	Grayson	13%
	Hood	12%
	Johnson	12%
	Parker	17%
	Tarrant	10%
	Wise	12%

N/A = No corresponding injury prevention data from the National Survey of Children's Health

Overview

Injury prevention basics. Accidental injuries are nonfatal or fatal injuries that are not caused on purpose or with the intent to harm. Accidental injuries are also known as unintentional injuries, particularly within state and national data. For consistency, the remaining information presented in this section will use the term unintentional injuries. In the U.S., nearly 5 million nonfatal unintentional injuries were treated in children in 2019.[3] Although most were released after treatment, nearly 170,000 required additional medical care or hospitalization.[3] In the same year, nearly 5,300 children died from unintentional injuries in the U.S.[3]

Unintentional injuries that do not result in fatalities can also have a significant impact on children's health and well-being. Approximately **147,770 children** ages 0–17 (12%) received **emergency care** for an accidental injury in the eight-county service area, and nearly 1 in 10 school-age children missed school due to an accidental injury, with the highest percentage among 12–17 year olds.

Unintentional injuries are the leading cause of death for children ages 1–17 in the U.S. and Texas.[3] The leading cause of unintentional injury deaths varies by age group:[3]

- Infants: suffocation due to unsafe sleep environments
- Children 1–4 years: drowning
- Children 5–17 years: motor vehicle traffic accidents
- Young children and teens: unintentional poisoning and firearm injuries

Unsafe sleep environments. **Unintentional suffocation** is the leading cause of injury-related death among children less than 1 year of age. Nearly 30% of sudden unexpected infant deaths (SUIDs) are due to unsafe sleeping situations that lead to unintentional suffocation or strangulation.[4] The three most commonly reported types of SUIDs are Sudden Infant Death Syndrome (SIDs), accidental suffocation or strangulation in bed (ASSB), and unknown causes. In 2019, the number of infant deaths in Texas due to SIDs decreased, whereas the number of ASSBs increased.[3]

Safe positioning and proper sleep environments help prevent deaths from unintentional suffocation or strangulation. These include ensuring that the infant sleeps alone, on their backs, and in a crib. The risk of injury or death caused by sharing a bed increases if the baby is under 3 months old; if there are multiple people in the bed; and if the adult is fatigued, a smoker, or an alcohol, medication or drug user.[5] The Texas Department of Family and Protective Services reports that between fiscal years 2019 and 2021 in Texas, there were 465 total infant deaths in Texas for which bed sharing was a factor.[5] Nearly 1 in 4 Texas mothers do not follow the recommendation to put their babies to sleep on their backs.[6] Nearly **2 in 5 young children do not sleep alone** in their own cribs or beds in the eight-county service area.[2] Community leaders reported in interviews that multiple children or adults often share the same sleeping area with an infant in overcrowded living situations or in shared motel rooms for families without a permanent home.

Drowning. **Drowning can happen suddenly** and in just an inch or two of water. Although drowning is a leading cause of unintentional injuries and death for children of all ages, children most at risk for drownings are those 1–4 years of age.

> Parent from Focus Group
> All those injuries typically happen in like one moment instance, like you've looked away for a second and that's when it happens…"

According to Texas Department of Family and Protective Services child drowning statistics, over 400 children died from drowning from 2017–2021 in Texas.[7] Over 70 of these drowning deaths occurred in the eight-county service area in the following locations: lake, pool (backyard, apartment, or community), hot tub, ponds, bathtubs, stock tank, fish tank, and water park.[7] From 2017 to 2020, Cook Children's treated almost 300 children for drownings. Nearly 10% of these drownings were fatal, and more than half occurred with children 1–4 years of age.[8]

Evidence-based measures to prevent drownings involve **layers of protection**, and the use of multiple layers further reduces the risk of drownings. These include:

- Close supervision of young children at all times during bath time and swimming.
- Teaching children swimming skills.
- Making sure children wear life jackets.
- Creating barriers to block unintentional access pools such as fencing.

In the eight-county service area, 7% of young children were not within reach of an adult during swim time, and **12% were not within reach of an adult during bath time**. Older children in the eight-county service area are also at risk for drowning. School-age children are less likely than younger children to be supervised while swimming, and 80% do not wear a life jacket.[2]

> Parent from Focus Group
>
> Water injuries are always a big thing. We've always had a pool, so that was a huge deal for me to teach our kids to swim as soon as possible and make sure we had alarms on our doors and such so they couldn't get out. We live on acreage, and there's a pond. There's definitely always that fear."

Motor vehicle crashes. Buckling up according to the **four stages of child restraints** is the most effective prevention for this leading cause of unintentional injuries and death in children ages 5 and older. Restraint use varies by age, and nearly half of car seats and boosters are misused in a way that could reduce their effectiveness. From 2017 to 2020, Cook Children's treated almost 4,000 injuries due to motor vehicle crashes.[7] In the eight-county service area, **1 in 5 children** is not always buckled up while in a vehicle, and rates vary by age group and decrease with older children.[2] For example, 4% of young children, 20% of 6–11 year olds and 36% of 12–17 year olds are not always buckled up while in a vehicle. This increases the risk for injury and death.[2] Also from 2017 to 2020, Cook Children's treated almost 800 fatal and nonfatal injuries related to **ATV or off-road vehicle** accidents, half of which were among children ages 10–14.[8] This number nearly doubled in 2020.[8]

Parents can set the example for children by adhering to safe driving practices when using all motor vehicles, including recreational vehicles. In a national study of fatal vehicle crashes involving child passengers, approximately one-third were caused by the actions of the driver, with the most common driver-related factors involving **distracted driving** (e.g., texting or other inattentive behavior), **intoxication and speeding**.[9]

Poisoning. Also a leading cause of child injuries and death, young children and teens experience the highest numbers of injuries caused by poisoning. These poisonings occur from various items, such as household cleaners, medications and drugs in the home. Safe dosing, safe storage and safe disposal efforts can help prevent a poisoning injury in a child or teen.[10] Poisonings may also occur due to medication dosing errors or unsupervised ingestion. From 2017 to 2020, Cook Children's treated almost 2,500 unintentional poison injuries.[8] In our eight-county service area, **1 in 4 young children** lives in a home with medication or household cleaners that are not always safely stored away.[2] This increases the risk for injury and death.

Firearm accidents. Texas has the highest rates of unintentional firearm deaths for children.[3,4] Most firearm injuries and deaths occur in **young children and teens**, and many of these are due to a firearm that was not safely locked away. From 2017 to 2020, Cook Children's treated 38 unintentional injuries related to firearms and handguns, which **increased in 2020**.[8] Of households with guns in the eight-county service area, 1 in 5 children lives in a home with guns that are not always safely locked away (locking up the firearm and storing ammunition in a separate location).[2] Rates of safe gun storage vary by age group and decrease with older children. For example, nearly 10% of young children, 20% of 6–11 year olds and 30% of 12–17 year olds live in a home with a gun that is not always safely locked away.[2]

In addition to safely storing firearms and ammunition, children also require supervision and safety practices using other types of guns (i.e., air guns, paintball guns, BB guns). From 2017 to 2020, Cook Children's treated 128 unintentional injuries caused by other guns, with the most injuries among 10–14 year olds.[8]

> "I think most people think 'this won't happen to us' because we've taught our kids to never touch guns. But if you aren't taking the proper precautions as the adult and parent, it's probably only a matter of when, not if, your life may be affected by an unintentional discharge involving someone you know — and maybe even your child." – Daniel Guzman, M.D.

Unsafe schools or neighborhoods. A safe school environment helps prevent injuries — both intentional and unintentional.[11] In the eight-county service area, 3% of school-age children have caregivers that do not think their children are safe at school. In a representative survey of Texas high school students conducted in 2019, 3% reported that they carried a weapon (gun, knife or club) on school property in the previous month and 7% reported they were threatened or injured with a weapon on school property in the previous year.[11] Also, 28% said they were offered, sold or given an illegal drug on school property. Although 96% of children have a caregiver that considers their neighborhood safe, **nearly 50,000 children live in potentially unsafe neighborhoods**.[2] This not only increases the risk for injuries, but also increases the risk of exposure to violence.

Impact of COVID-19 on injury prevention. Nearly **9 in 10 community leaders** were concerned that the COVID-19 pandemic was having a negative impact on safety in the home — in part due to the multitude of associated stressors that could cause unintentional and intentional injuries. The COVID-19 pandemic caused increased financial strain, psychosocial stress, and anxiety for parents and caregivers. School closures may be resulting in reduced levels of supervision as caregivers work from home without day care, in-person school, and recreational opportunities.[12]

Although additional research is needed about the impact of the pandemic on injury rates for children, several recent studies are available. In a review of pediatric trauma admissions transpiring pre-and post- shelter in place, researchers found a 13% overall decrease in pediatric trauma volume occurred during 2020.[12] However, **injury severity was higher** and there was an increase in non-motorized vehicle accidents and gunshot

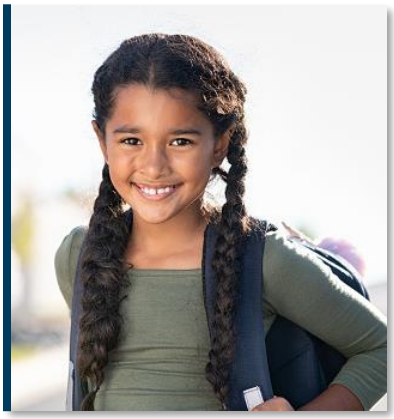
wounds.[12] According to a 2021 research study comparing gun injury incidents during the first 6 months of the COVID-19 pandemic to the corresponding pre-pandemic periods, stress factors combined with increased rates of firearm ownership are contributing to **dramatic increases in fatal and nonfatal firearm injuries** both in young children and inflicted by young children.[13] This surge in firearm injuries correlates with a rise in firearm acquisitions. Recommendations to improve gun safety include encouraging gun owners to obtain firearm safety instructions regarding safe storage, developing partnerships with ranges or gun shops to promote safe storage, and increasing public awareness.[13]

A study of Texas traffic during the pandemic indicates that while there were fewer crashes early on, there were about 50% more fatalities.[14] Rates for multi-vehicle crashes decreased by 55% while the proportion of crashes with at least one fatality rose 59%. Rates for single-vehicle crashes decreased by 23%, while the proportion of crashes with at least one fatality rose 14%. Researchers concluded that the risk of death or injury is greater when roads are more clear, a finding that is attributed to an increase in average speed.

H.E.L.P. for health equity

Disparities in injuries and fatalities. Children in the eight-county service region have a higher risk of unintentional injuries as a result of socioeconomic factors. These factors add additional challenges for families to learn and implement prevention behaviors. When compared with the eight-county service area, the following disparities were noted.

Children in households **with family incomes under $100,000** are:[2]



- More likely to have missed school due to unintentional injuries.
- Less likely to sleep alone in their own beds or cribs.
- Less likely to have an adult within reach while swimming (young children).
- Less likely to have firearms in the home that are stored safely.

Children **experiencing homelessness or living with an undocumented parent or caregiver** are:[2]

- More likely to have received emergency care for unintentional injuries.
- Nearly twice as likely to have missed school due to unintentional injuries.
- More likely to not sleep alone in their own beds or cribs (3 in 5 young children).
- Nearly three times less likely to have an adult within reach while swimming (young children).
- Nearly three times less likely to have firearms in the home that are stored safely.

Among **children of color**:

- Rates of unintentional injuries differ according to race and ethnicity, as indicated in Table 26.
- Young children of color have a greater risk of unintentional injuries and death due to accidental suffocation or strangulation. This is consistent with national and state estimates of infant deaths[3,4] and safe sleep behaviors of mothers with infants.[5,6]

Table 26. Safety of children by race/ethnicity compared with the eight-county service area[2]

According to parent or caregiver	Received care for injury	Missed school due to injury	Child does not sleep in own crib or bed (birth to age 5)	Child not always within reach during swim (birth to age 5)	Child not always buckled up in vehicle	Med not always locked-up (birth to age 5)	Guns not always locked-up
8-County Service Area	12%	9%	43%	7%	19%	21%	18%
Hispanic	12%	9%	50%	9%	21%	17%	26%
White, Non-Hispanic	13%	10%	32%	4%	17%	21%	14%
Black, Non-Hispanic	11%	8%	62%	14%	20%	28%	28%
Asian, Non-Hispanic	14%	4%	55%	12%	24%	30%	35%
Other/Multi-race, Non-Hispanic*	11%	10%	54%	8%	17%	16%	9%

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey
Green shading corresponds to highest percentages within each column for race and ethnicity.

Injury prevention training opportunities

Helping parents learn how to best protect their children from unintentional injuries is a daunting task. Parents and caregivers need up-to-date information on a variety of prevention topics and the recommendations often change as their children grow. While daunting, it is an important endeavor due to the severity of injuries and fatalities that can occur from preventable accidents. For most of the injury prevention behaviors listed in Table 26, additional outreach, resources and awareness are needed for all children, but especially children of color — specifically non-Hispanic Black, non-Hispanic Asian and Hispanic children. This assessment indicates multiple opportunities for parent education, including:

- Types of injuries common within the various age ranges.
- Safe sleep environments.
- Importance of watching young children at all times around water.
- Safety benefits of installing fencing around pools.
- Steps for properly buckling up children in the appropriate car seat for their age.
- Education for teens and parents on safe driving behaviors, including wearing a seat belt when riding in a motor vehicle. In a 2019 survey of Texas high school students, 7% said they never or rarely wore a seatbelt when riding in a car.[11]
- Safe dosing, safe storage, and safe disposal of cleaning products and medications.
- Importance of locking up guns and ammunition, especially since gun injuries have increased during the pandemic.
- To learn good safety practices, parents may need guidance from trained safety specialists using demonstration methods of teaching and checking understanding by asking participants to state in their own words what they need to do to ensure their child's safety.

Another opportunity for parent/caregiver education is related to social media. In interviews, community leaders highlighted a need for materials and programs to reach older children, specifically with the safety risks associated with social media. This includes a need for safety education about popular TikTok challenges that can be dangerous (e.g., climbing on stacked milk crates, Tide Pod challenge, Benadryl challenge) and dangers to personal safety and access to drugs through Snapchat. In addition to over-the-counter medications, recent teen deaths are linked to unintentional fentanyl overdoses.[15,16] In March 2021, Cook Children's admitted three patients for overdoses after taking Percocet pills without knowing they were laced with fentanyl.[15] Patients said they found the dealers for these drugs on Snapchat.

Injury prevention collaboration opportunities

Parents, schools and communities play a role in preventing unintentional injuries. Additionally, some aspects of injury prevention coincide with mental health — specifically for self-harm, suicide, substance abuse and opioid addiction. [10,13,15,16]

- Provide evidence-based education and training for children, adolescents, parents and caregivers to increase awareness of the importance of injury prevention. These efforts should prioritize children in low-income areas, children in rural areas, and children of color. Provide incentives for implementing safety measures, such as car seats and medication or gun lock boxes.
- Provide evidence-based professional development for health care providers, school nurses, and community partners targeting services to populations with higher rates of unintentional injuries.
- Increase awareness in the general community about the importance of injury prevention measures.
- Increase the priority for implementing strategies for gun safety. The impact of the COVID-19 pandemic on gun injuries to children is significant.

- Increase family awareness about community resources available for injury prevention.
- Advocate for public policy changes that support injury prevention, including child restraint laws, booster seat provisions, pool ordinances, etc.

Healthy People 2030 objectives

- Reduce unintentional injuries and deaths.
- Reduce the rate of infant deaths.

- Increase the proportion of infants who are put to sleep on their backs.
- Increase the proportion of infants who are put to sleep in a safe sleeping environment.
- Reduce emergency department visits for nonfatal unintentional injuries.
- Reduce firearm-related deaths.
- Reduce overdose deaths involving opioids.
- Reduce emergency department visits for medication overdoses in children under 5 years.
- Reduce the suicide rate.
- Reduce suicide attempts by adolescents.
- Reduce emergency department visits for nonfatal intentional self-harm injuries.

Injury Prevention References

[1] Child and Adolescent Health Measurement Initiative. 2019–2020 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, the Health Resources and Services Administration (HRSA), and the Maternal and Child Health Bureau (MCHB). Retrieved 10/13/2021 from www.childhealthdata.org.

[2] Community-wide Children's Health Assessment and Planning Survey (CCHAPS) (2021). Cook Children's Health Care System. Fort Worth, Texas.

[3] Centers for Disease Control and Prevention. (2021, December 2). *WISQARS (web-based injury statistics query and reporting system)*. Centers for Disease Control and Prevention. Retrieved January 2022, from http://www.cdc.gov/injury/wisqars.

[4] Centers for Disease Control and Prevention. (2021). *CDC WONDER (wide-ranging online data for epidemiologic research).* Centers for Disease Control and Prevention. Retrieved March 2022, from http://wonder.cdc.gov/.

[5] Texas Department of Family and Protective Services. (2022). *Room sharing and safe sleep for babies.* https://www.dfps.state.tx.us/Prevention_and_Early_Intervention/Room_Sharing/default.asp.

[6] Texas Department of State Health Services. (2021, January). *Pregnancy Risk Assessment Monitoring System (PRAMS) Survey. 2018 Data Book: Summary Tables*. Retrieved October 2022, from https://www.dshs.texas.gov/mch/pdf/2018-PRAMS-Databook.pdf.

[7] Texas Department of Family and Protective Services. (2022). *2017-2021 Child Drowning Statistics*. Retrieved March 2022, from https://www.dfps.state.tx.us/Prevention_and_Early_Intervention/Child_Drownings/2021.asp

[8] Cook Children's Health Care System. Health Care Analytics and Trauma Registry Departments. 2021.

[9] Maasalo, I., Lehtonen, E., & Summala, H. (2019). Drivers with child passengers: distracted but cautious? *Accident; analysis and prevention, 131*, 25–32. https://doi.org/10.1016/j.aap.2019.06.004.

[10] Cook Children's. (2021, April 20). *Why Locking Up Over-the-Counter Medications Can Help Prevent Youth Suicide Attempts*. Retrieved October 2021, from https://www.checkupnewsroom.com/why-locking-up-over-the-counter-medications-can-help-prevent-youth-suicide-attempts/.

[11] Texas Department of State Health Services. Youth Risk Behavior Survey (YRBS). https://healthdata.dshs.texas.gov/dashboard/surveys-and-profiles/youth-risk-behavior-survey.

[12] Bessoff, K. E., Han, R. W., Cho, M., Stroud, M., Urrechaga, E. M., Thorson, C. M., Russell, K. W., Rohan, A., Acker, S. N., Swain, S., Malvezzi, L., Fuchs, J. R., & Chao, S. D. (2021). Epidemiology of pediatric trauma during the COVID-19 pandemic shelter in place. *Surgery open science*, 6, 5–9. https://doi.org/10.1016/j.sopen.2021.06.001

[13] Cohen, J. S., Donnelly, K., Patel, S. J., Badolato, G. M., Boyle, M. D., McCarter, R., & Goyal, M. K. (2021). Firearms injuries involving young children in the United States during the COVID-19 pandemic. *Pediatrics, 148*(1), e2020042697. https://doi.org/10.1542/peds.2020-042697

[14] Kellett, A. (2020, October 12). Road safety study during the pandemic shows risk of death or injury is greater when roads are clearer. *Texas A&M Transportation Researcher, 56*(3). Retrieved March 2022, from https://tti.tamu.edu/researcher/road-safety-study-during-the-pandemic-shows-risk-of-death-or-injury-is-greater-when-roads-are-clearer/

[15] Cook Children's. (2021, May*). 'It's a huge problem right now': Teen opioid overdoses spike at Cook Children's.* Retrieved October 2021, from https://www.checkupnewsroom.com/its-a-huge-problem-right-now-teen-opioid-overdoses-spike-at-cook-childrens/.

[16] Muller, M. & Ceron, E. (2022, February 11). *Teenage fentanyl deaths are soaring, and black teens are hit hardest: doctors see victims as young as 14 in emergency rooms*. Bloomberg Equality. Retrieved March 2022, from https://www.bloomberg.com/news/articles/2022-02-11/teenage-fentanyl-deaths-are-soaring-and-black-teens-are-hit-hardest

ASTHMA BRIEF

Child asthma is a lung disease with symptoms of breathing difficulties. Asthma symptoms can be managed with appropriate medications and reduced exposure to allergens within a child's environment. If symptoms are not properly managed, children miss school, need emergency care or require hospitalization.

One in 10 children (an estimated 118,700 children) in our eight-county service area currently has asthma. Of these children, 8% visited an emergency room in the past year because of asthma symptoms.

10%	7%	8%
8-County Service Area 2021	State of Texas 2019*	U.S. 2019*

PERCENTAGE OF CHILDREN WITH ASTHMA

H.E.L.P. for Asthma

H	Health	**Equitable Access to Care & Basic Needs** Of children with asthma in the eight-county service area, **1 in 6** does not have a personal doctor and **1 in 7** did not receive needed medical care during the pandemic. **One in 12 children** with asthma visited an emergency department due to symptoms in the past year — rates are highest among children in households with incomes below $50,000, Hispanic or Non-Hispanic Black children.
E	Environment	**Safety Where Children Live, Learn & Play** Although children experiencing **homelessness or living with an undocumented parent or caregiver** have slightly lower rates of asthma, these children are twice as likely to not have a personal doctor or continuous insurance coverage, and are nearly three times as likely to not receive care. Children living in **households with income below $50,000** have higher rates of asthma and are **12 times more likely** to visit an emergency room for asthma symptoms when compared with children in higher-income families.
L	Learning	**Readiness & Support for Academic Success** Of school-age children with asthma in the eight-county service area, **1 in 4** missed school due to asthma symptoms. Children experiencing homelessness or living with an undocumented parent or caregiver have higher rates of missed school.
P	Parenting	**Parenting & Family Support** Focus group parents recommend increased community awareness about asthma symptoms and triggers to provide additional support from the local community.

For more information, please see the Methodology or full Asthma section, or visit our CHNA dashboard.
Unless otherwise noted on this brief, all asthma references are noted in the full Asthma Data Review.
*2019 National Survey of Children's Health.

ASTHMA DATA REVIEW

One in 10 children in our eight-county service area currently has asthma.

Percentage of children with asthma

Benchmarks[1]	U.S.	Pre-pandemic (2019): **8%**
	Texas	Pre-pandemic (2019): **7%**
Service Areas[2] (2021)	8-County Service Area	10%
	FWSA // 6-County	10%
	PSA // 3-County	8%
Individual Counties[2] (2021)	Collin	7%
	Denton	9%
	Grayson	7%
	Hood	7%
	Johnson	10%
	Parker	10%
	Tarrant	11%
	Wise	12%

Overview

Asthma basics. The CDC reports that asthma is a leading chronic illness among children and adolescents in the U.S. and also a leading cause of absenteeism in schools.[3] Asthma is a lung disease with symptoms of wheezing, breathing difficulties or chest tightness.[4] Although these symptoms can be managed with appropriate medications and reduced exposure to allergens, if children have uncontrolled asthma they may need to miss school, seek emergency care or be hospitalized as a result.[5] Nearly **1 in 4 school-age children** in the eight-county service area **missed school** due to asthma symptoms.[2] Each year in the U.S., 1 in 6 children with asthma visits the emergency department, and nearly 1 in 20 children with asthma is hospitalized for asthma.[6] At Cook Children's Medical Center-Fort Worth during 2017–2020, a total of **11,167 children visited the emergency department**, and 4,500 were hospitalized due to asthma symptoms.[7] Approximately 40% of these children were under the age of 5.[7] According to parents and caregivers within our eight-county service area, 8% of children with asthma visited an emergency room in the past year for treatment of asthma symptoms.[2] Children experiencing homelessness in a shelter or living with an undocumented parent or caregiver were **five times more likely** to have an emergency visit due to asthma.[2]

Multiple strategies are required to help children with asthma manage their symptoms on a daily basis. These include:[8]

- Create and follow an **asthma action plan**. The CDC recommends that everyone with asthma needs an individualized asthma action plan to prevent and control asthma attacks. Plans are individualized for

the child by a health provider and usually include instructions for proper medication use and a checklist of symptoms and severity to help caregivers recognize when the asthma is getting worse. In the eight-county service area, **1 in 5** school-age children with asthma **does not have an asthma action plan**.[2] For school-age children experiencing homelessness or living with an undocumented parent or caregiver, these estimates are **nearly doubled**.[2]

> Parent from Focus Group
>
> [The plan is] taped up inside our medicine cabinet so anybody can see it. …when to call the doctor and the phone numbers on there; who to call if you've done these things and [it is] still getting worse; and what the next step [should be]."

- Ensure that children receive a **flu vaccination** every year.
- Help child to **take medicine exactly as prescribed** by the doctor or medical professional.
- Partner with the child's school to promote an **asthma-friendly learning and home environment**.

Asthma triggers. Asthma in children can escalate when children are exposed to certain environmental triggers at home or at school, and different children experience these differently. The CDC recommends that parents and children know the specific triggers and avoid them. Common triggers include:[9]

- Tobacco smoke
- Dust mites
- Outdoor air pollution
- Pests (e.g., cockroaches, mice)
- Pets
- Mold
- Cleaning and disinfection products
- Bad weather events (e.g., thunderstorms or high humidity)
- Infections linked to influenza, colds, and respiratory syncytial virus (RSV)

Impact of COVID-19. The CDC states that COVID-19 affects the respiratory tract and people with moderate-to-severe or uncontrolled asthma may be at greater risk for more severe disease. Vaccines are strongly recommended along with other preventative measures appropriate for the risk level.[10] A December, 2021 study reports that children with poorly controlled asthma are at a higher risk of being admitted to the hospital with COVID-19, and that children ages 5–17 with poorly controlled asthma are three to six times more likely to be admitted to the hospital with COVID-19 compared with children without asthma.[11]

In managing treatment for children on a day-to-day basis, parents and caregivers were faced with closed clinics or limited patient visits early in the pandemic. However, healthcare providers responded quickly, launching virtual clinics and helplines which resulted in better than expected disease control for some patients. Overall, children with asthma do not appear to be disproportionately affected by COVID-19 and outcomes for some children even improved.[12]

> Parent from Focus Group
>
> This pandemic, my kids have gotten sent home so many times from school, because of my middle child and his asthma issues and even though they know he has asthma, the cough, was, is considered a COVID symptom, and there are three of them. So when...they send one home, they send them all home. One week, I had to pick them up early three out of the five days, I had to leave work."

Another challenge for parents during the pandemic was the similarity of COVID-19 symptoms with asthma symptoms, resulting in challenges for schools managing safety protocols. Parents in focus groups reported their children were sent home purportedly displaying COVID-19 symptoms that were actually asthma symptoms, resulting in some children with asthma missing more school time.[2] This experience may explain why some parents in focus groups felt that more support was needed from school nurses and teachers to help manage their child's asthma. They would like better communication between schools and parents about their child's needs and care coordination between health care providers and schools.[2]

H.E.L.P. for health equity

Access to asthma care. Most children with asthma in the eight-county service area have a personal doctor and continuous health insurance coverage and were able to receive all needed medical care and medication. About 10% of children in the eight-county service area (an estimated 118,700 children) currently have asthma (FWSA-10% and PSA-8%). For these children who currently have asthma in the eight-county service area:[2]

- **20,000 children (17%)** do not have a personal doctor (FWSA-18% and PSA-13%).
- **9,490 children (8%)** did not have continuous insurance coverage in the past year (FWSA-7% and PSA-9%).
- **17,040 children (14%)** did not receive needed medical care in the past year (FWSA-14% and PSA-17%).
- **5,220 children (5%)** did not receive the asthma medication prescribed to them (FWSA-4% and PSA-7%).

Approximately 25% of community leaders responding to our survey believe children in their communities have difficulty accessing care for long-term illness (e.g., treatment for asthma).[2]

Disparities in accessing care among children with asthma within the eight-county service area include:

- Children living in **households with income below $50,000** have higher rates of asthma and are **12 times more likely** to visit an emergency room for asthma symptoms when compared with children in higher-income families.
- Children experiencing **homelessness or living with an undocumented parent or caregiver** have slightly lower rates of asthma than those for in the eight-county service area. However, these children are twice as likely to not have a personal doctor or continuous insurance coverage, and are nearly three times as likely to not receive care. Children in this population also have **higher rates of missed school and emergency department visits due to asthma symptoms**.

Disparities among children with asthma. As indicated in Table 27, **asthma rates differ by race and ethnicity**. This trend is consistent with national and state estimates, with asthma rates highest among Hispanic and non-Hispanic Black and Other/Multi-race* children.

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey

Table 27. Children with asthma by race/ethnicity and service area[2]

	Eight-County Service Area	Fort Worth Service Area (FWSA)	Prosper Service Area (PSA)
Hispanic	9.7%	11.1%	8.5%
White, Non-Hispanic	8.7%	9.4%	7%
Black, Non-Hispanic	15.4%	16.7%	9.1%
Asian, Non-Hispanic	5.2%	5.5%	4.5%
Other/Multi-race, Non-Hispanic*	11.9%	10.3%	14.3%

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey
Green shading corresponds to highest percentages within each column as mentioned paragraph above table.

Asthma training opportunities

Training and education to support parents and caregivers in successfully managing their child's asthma should include: (a) obtaining and following an asthma action plan for their child; (b) learning the importance of taking medication(s) as prescribed; (c) learning how to manage triggers; (d) recognizing and responding to signs of escalation; and (e) communicating with schools other family contacts about the child's asthma action plan and their specific symptoms.[6]

Focus group parents recommend increased community awareness about asthma symptoms and triggers to provide additional support from the local community. One parent highlighted the importance of her child connecting with other asthmatic children through Cook Children's Asthma Camp.

> Parent from Focus Group
> He's gotten to meet other kids with asthma [at Cook Children's Asthma Camp], so I think that was always good. He met a couple of kids in his school, and he's like, "Mom, he has asthma like me." So made it feel more normal for him. He loves that."

Asthma collaboration opportunities

The community can help the estimated 118,700 local children in the eight-county service area with asthma manage their symptoms through collaboration among health care professionals, advocacy groups, schools and others. The findings of this CHNA point to the importance of supporting effective, multiple strategies for supporting families with asthma as recommended by the CDC:

- Improve access to health care, including working with community health workers, pharmacists, and others to ensure that children with asthma receive needed services.[6]
- Support parents and caregivers to successfully manage their child's asthma through evidence-based training and educational resources about treatment options and addressing asthma triggers.[6]
- Advocate for and support close partnerships between schools and health care providers to ensure appropriate and ongoing medical care.[9]
- Provide continuing professional development opportunities for school nurses and other school staff about the most current research on controlling asthma and how to help children control it.[6]
- Advocate for asthma-friendly policies in schools and child care settings to help children follow their action plans, such as stocking quick relief medications, letting older children carry controller and rescue medicines, and helping children take part in exercising indoors when air quality is poor.[6]

- Advocate for and support schools and child care settings to provide a safe and healthy environment to reduce asthma triggers and develop enjoyable physical activities for children with asthma.[3]
- Promote public policies and best practices to reduce exposure to indoor and outdoor asthma triggers such as tobacco smoke and air pollution.[6]
- Track asthma rates at a community level to assure efficient and effective use of resources invested in asthma services.[6]

Healthy People 2030 objectives

- Reduce emergency department visits for children under age 5 with asthma.
- Reduce hospitalizations for asthma in children under age 5.
- Reduce asthma attacks.
- Increase the proportion of schools with policies and practices that promote health and safety.

Asthma References

[1] Child and Adolescent Health Measurement Initiative. 2019–2020 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, the Health Resources and Services Administration (HRSA), and the Maternal and Child Health Bureau (MCHB). Retrieved 10/13/2021 from www.childhealthdata.org.

[2] Community-wide Children's Health Assessment and Planning Survey (CCHAPS) (2021). Cook Children's Health Care System. Fort Worth, Texas.

[3] *Asthma - Healthy Schools.* (2022, February 24). Centers for Disease Control and Prevention. Retrieved March 1, 2022, from https://www.cdc.gov/healthyschools/asthma/

[4] *Have Asthma? Learn how you can improve your health and quality of life.* (2022, February 22). Centers for Disease Control and Prevention. Retrieved March 15, 2022, from https://www.cdc.gov/asthma/default.htm

[5] Hsu, J., Qin, X., Beavers, S. F., & Mirabelli, M. C. (2016). Asthma-Related School Absenteeism, Morbidity, and Modifiable Factors. *American Journal of Preventive Medicine*, *51*(1), 23–32. https://doi.org/10.1016/j.amepre.2015.12.012

[6] *Asthma in Children*. (2018, November 13). Centers for Disease Control and Prevention. Retrieved March 15, 2022, from https://www.cdc.gov/vitalsigns/childhood-asthma/index.html

[7] Cook Children's Health Care System. Health Care Analytics Department. 2021.

[8] *Asthma - Management and Treatment.* (2018, January 30). Centers for Disease Control and Prevention. Retrieved January 15, 2022, from https://www.cdc.gov/asthma/management.html

[9] *Learn what could be triggering your asthma attacks.* (2020, August 21). Centers for Disease Control and Prevention. Retrieved March 28, 2022, from https://www.cdc.gov/asthma/triggers.html

[10] *COVID-19 and Your Health*. (2020, February 11). Centers for Disease Control and Prevention. Retrieved January 27, 2022, from https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/asthma.html

[11] Mahase, E. (2021). Covid-19: Poorly controlled asthma increases risk of hospital admission among children sixfold, finds study. *BMJ*, n2959. https://doi.org/10.1136/bmj.n2959

[12] Papadopoulos, N. G., Custovic, A., Deschildre, A., Mathioudakis, A. G., Phipatanakul, W., Wong, G., Xepapadaki, P., Agache, I., Bacharier, L., Bonini, M., Castro-Rodriguez, J. A., Chen, Z., Craig, T., Ducharme, F. M., El-Sayed, Z. A., Feleszko, W., Fiocchi, A., Garcia-Marcos, L., Gern, J. E., . . . Zawadzka-Krajewska, A. (2020). Impact of COVID-19 on Pediatric Asthma: Practice Adjustments and Disease Burden. *Journal of Allergy and Clinical Immunology: In Practice*, *8*(8), 2592–2599.e3. https://doi.org/10.1016/j.jaip.2020.06.001

RECOMMENDATIONS AND NEXT STEPS

Based on the findings of this assessment, we encourage collaborative efforts around the following concepts to support the health and well-being of children within the eight-county service area:

- Assess the mental health ramifications from COVID-19, and explore solutions to improve the delays in care resulting from the COVID-19 pandemic.
- Consider the social determinants of health as critical components to keeping children healthy, including access to food, safe environments, housing stability, transportation and economic stability.
- Recognize that health and well-being go beyond physical health to include oral health, mental health and children's exposure to trauma.
- Promote and participate in cross-collaborations among programs and services to families to expand our community's reach and to coordinate efforts addressing multiple health issues simultaneously.
- Evaluate and advocate for system responses and policies that support children's health issues that are exacerbated by community-level and societal-level factors (e.g., mental health, substance use, and obesity).

Please Join Us

We recognize that children's health issues are complex and that successful strategies require a collaborative effort among a broad range of organizations. We invite individuals and community organizations to join us in our efforts to address the children's health issues identified in this assessment.

Please consider joining one of the local coalitions led by Cook Children's or volunteering for one of our community outreach programs that serve families. For more information, please visit our website at www.centerforchildrenshealth.org.

2021 Implementation Strategies

Cook Children's developed implementation strategies to address the priority health issues noted in this assessment. Individual strategy plans for the Fort Worth Service Area and Prosper Service Area were approved by the Cook Children's System Board on April 26, 2022. These strategy plans are available for public viewing on the Cook Children's website.

AVAILABLE RESOURCES

Selected key resources for the children's health needs identified in this assessment for our eight-county service area are listed below by priority focus area and the county or counties served, along with other general health resources. Many additional community resources are available and are accessible through 211 Texas (www.211texas.org) or Tarrant Cares and TXT4Tarrant Cares (www.tarrantcares.org).

SELECTED COMMUNITY RESOURCES		
Priority	**Organization**	**County**
Parenting & Family Support	ACH Children and Family Services	Tarrant
	Center of Hope	Parker
	Children's Advocacy Center	Denton, Grayson, Hood, Parker
	Children @ Risk	Collin, Denton, Grayson, Hood, Johnson, Parker, Tarrant, Wise
	City House	Collin
	Court Appointed Special Advocates (CASA)	Collin, Denton, Grayson, Hood, Johnson, Parker, Tarrant, Wise
	Family Resource Center	Denton
	Help Me Grow North Texas	Collin, Denton, Grayson, Hood, Johnson, Parker, Tarrant, Wise
	Lena Pope Counseling Services	Parker, Tarrant
	MasterKey Ministries of Grayson County	Grayson
	Mission Granbury	Hood
	Rancho Brazos Community Center	Hood
	The Women's Center of Tarrant County	Tarrant
Oral Health Care	Catholic Charities Dental	Tarrant
	Collin County Community College Dental Hygiene Center	Collin
	Community Dental Care	Collin, Grayson
	Dental Health Arlington	Tarrant
	Denton County Public Health – Dental Hygiene Clinic	Denton
	Denton Kiwanis Club Children's Clinic	Denton
	Family Health Center on Virginia	Collin
	First Refuge Ministries Dental	Denton
	Fort Worth District Dental Society	Tarrant
	Four Rivers Dental Clinic	Denton
	Mercy Clinic (Medical, Dental)	Tarrant
	Mission Arlington	Tarrant
	Tarrant County College Dental Hygiene Clinic	Tarrant
	Texas Woman's University Dental Hygiene Clinic	Denton

Equitable Access to Care		
General Health & Injury Prevention	Beautiful Feet Ministries | Homeless Services	Tarrant
	Clinica Guadalupe	Tarrant
	Southeast Community Health Center	Tarrant
	Health Equity Alliance (HEAL)	Tarrant
	Community Healthcare Clinic	Collin
	Cornerstone Assistance Network and Medical Services	Tarrant
	Crowley House of Hope Clinic	Tarrant
	Denton County MHMR	Denton
	Grand Prairie Community Health Center	Tarrant
	Grapevine Relief and Community Exchange	Tarrant
	Grayson County MHMR	Grayson
	JPS Health Network	Tarrant
	LifePath Systems (Collin County MHMR)	Collin
	MHMR Tarrant County	Tarrant
	Mission Arlington	Tarrant
	North Texas Area Community Health Centers	Tarrant
	Open Arms Health Clinic	Tarrant
	UNT Health Science Center, Patient Care Center, Pediatrics	Tarrant
Hospitals	Baylor Medical Center Irving	Collin, Denton
	Baylor Scott and White Health	Collin, Denton, Grayson, Tarrant
	Children's Medical Center	Collin, Denton, Grayson
	Denton Regional Medical Center	Denton
	Huguley Memorial Medical Center	Tarrant
	Lake Granbury Medical Center	Hood
	JPS Health Network	Tarrant
	Medical City Healthcare	Collin
	Methodist Charlton Family Medicine Center	Collin
	North Texas Medical Center	Grayson
	Plaza Medical Center of Fort Worth	Tarrant
	Presbyterian Hospital of Denton	Denton
	Texas Health Resources / Texas Health Presbyterian	Collin, Denton, Grayson, Johnson, Parker, Tarrant
	Texhoma Medical Center	Grayson, Collin
	University Behavioral Health of Denton	Denton
	Wilson N. Jones Regional Medical Center	Grayson, Collin
	Wise Health System	Wise
Last Resort Funding	Community Services, Inc.	Collin, Denton
	Christian Community Action	Denton
	Christian Homes & Family Services	Collin, Denton, Grayson

Last Resort Funding (cont.)	Family Promise of Collin County	Collin
	Family Promise of Grayson County	Grayson
	Gill Children's	Tarrant
	Masonic Children and Family Services of Texas	All counties
	Northwest Christian Community Services	Denton
	Patient Access Network Foundation	Collin, Denton, Grayson
	United HealthCare Children's Foundation	Collin, Denton, Grayson
Public Health Agencies	Collin County Public Health	Collin
	Denton County Public Health	Denton
	Parker County Hospital District	Parker
	Tarrant County Public Health	Tarrant

Cook Children's Health Care System offers a medical center, **seven** neighborhood clinics to serve low-income families in Tarrant County, and over **40** primary care offices and urgent care centers in Collin, Denton, Hood, Johnson, Parker and Tarrant counties. Please see www.cookchildrens.org for specific locations.

CHILD HEALTH ISSUES NOT DIRECTLY ADDRESSED

Children and their families face many health issues identified in our assessment which are beyond the scope, resources and capacity for Cook Children's to develop active community programs. Those issues are being addressed in the community and Cook Children's takes active leadership or supporting roles in such child health areas as Infant Mortality, Teen Pregnancy, Child Drug Use and Substance Abuse, School Graduation Rates, Vision and Hearing Screening and others. Currently Cook Children's is active in the following community-wide initiatives:

Best Place for Kids (Tarrant)
Big Tent Mental Health Connection Parker County
Blue Zones Project Fort Worth
Burleson Be Healthy Initiative (Johnson)
Child Fatality Review Team – Tarrant County
Children at Risk - North Texas
Children's Hospital Association Board, Child Health Committee
Children's Well-Being Collaborative (Tarrant)
Community Response to Homelessness in Early Childhood (Tarrant)
Denton County Behavioral Health Leadership
Denton County Healthy Communities Coalition
Denton Regional Suicide Prevention Coalition (Denton)
Early Childhood Wellness Council (Tarrant)
Early Learning Alliance of North Texas (Tarrant)
First 3Years (All 8 counties)
Fort Worth Drowning Prevention Coalition (Tarrant)
Health Equity Alliance (HEAL)—Tarrant
Healthy Tarrant County Collaboration
Hood County Substance Abuse Council
Immunization Collaboration of Tarrant County
Johnson County Community Resource Group
Johnson County Mental Health Connection
Mental Health Connection of Tarrant County (Tarrant)
Mental Health Connection (Recognize & Rise Steering Committee)—Tarrant
MHMR-Help Me Grow North Texas (All 8 counties)
NorTex Community Advisory Board
North Texas Asthma Consortium
North Texas Health Alliance
Nurse Family Partnership Advisory Board (Tarrant)
Parker County Community Resource Group
Tarrant Area Food Bank
Tarrant Cares (Governance Board)—Tarrant
Texas Child Heat Stroke Task Force
Texas Drowning Prevention Alliance Fort Worth Safe Communities (Tarrant)
TexProtects
THR Harris Fort Worth Community Health Council (Tarrant)
United Way Steering Committee – Arlington (Tarrant)
UNT Health Science Center - Community Advisory Board
UNT Health Science Center SaferCare Texas
Urban Strategies (Tarrant)
Wise County Health Forum

PROGRESS MADE SINCE THE 2018 CHNA

Five priorities identified in the 2018 CHNA provided the strategic focus for the Cook Children's community outreach efforts through 2021. A brief summary of the impact made in addressing each priority issue is provided below. Additional details and evaluation results are available in Appendix E. These priorities also informed Cook Children's policy and advocacy efforts.

Priority health topic: Child abuse and neglect prevention

Goals/strategies from the 2018 implementation plan: Prevent child abuse and neglect through (1) reducing the occurrence of adverse childhood experiences (ACEs) through policy, practice and parent support; (2) providing community education to promote recognition, prevention and recovery; and (3) reducing the impact or risk factors for child abuse through implementation of "Circles of Support" or other validated strategies.

ACEs

- Reconvened the ACEs Task Force following the start of the COVID-19 pandemic, with an expanded membership and special emphasis on supporting families through the pandemic. The task force assisted with the distribution of youth suicide prevention educational materials to partners throughout the community supporting the Cook Children's JOY Campaign, which stands for "Just Breathe, Open Up, You Matter." This campaign is designed to encourage emotional health and access to mental health resources. The task force also hosted listening sessions in the community to learn more about barriers to access to community resources and convened a group to develop and implement a community-driven plan for addressing the needs of families whose adversities were exacerbated by the pandemic.
- Maintained a "Survivors Like Us" social media resource to bring together child abuse survivors with a recovery focus. The Facebook page has 16,475 followers.
- Continued development of the PRO-TX analytical tool for informing ACEs programming and resource allocation at Cook Children's and state agencies.

Community Education

- Developed educational resources and prevention tools in English and Spanish designed to extend the reach of key health messages to a larger audience. These include two child abuse prevention trainings for professionals, an ACEs 101 presentation for community groups, and production and distribution of anxiety support tools (e.g., fidget toys) and a family home medical file.
- Developed a nine-part webinar series of COVID-19 vaccine education/training videos featuring Cook Children's physicians and the assistant medical director of Tarrant County Public Health. The target audiences are on-the-ground community professionals, such as day care workers, public health employees, government-housing professionals and others considered as trusted individuals within their respective communities. To date, more than 1,200 participants have viewed one or more videos.
- Formally launched the TXT4 Tarrant Cares texting platform in partnership with Mental Health Connection to help families find community resources and support closer to where they live. Families can search a community database of resources based on their ZIP codes via a text message.

- Continued an early-detection web-based training designed to help medical professionals and first responders more quickly recognize and report suspected cases of child abuse and neglect.

Reducing Risk Factors for Child Abuse

- Designed and implemented a Build-a-Bridge™ program along with a companion Caregiver Alliance to strengthen protective factors for families dealing with adversity. Build-a-Bridge increases parent awareness of the importance of establishing medical homes for children and works to increase access to community resources. Educational materials on positive parenting, mental health, child safety, developmental milestones and family activities are routinely provided to Build-a-Bridge families and to other community partners.

Priority health topic: Wellness – Asthma

Goal/strategy from the 2018 implementation plan: Improve control of childhood asthma through engaging families and increasing access to social supports to minimize asthma triggers.

Healthy Homes

- Expanded the Healthy Homes program to provide home assessments and to help families identify asthma triggers and their specific needs for home hygiene supplies. Home assessments resulted in the distribution of asthma-trigger remediation items and contract services (e.g., carpet cleaning, pest control, etc.).

Asthma 411

- Continued partnership with the University of North Texas Health Science Center to equip school nurses with the appropriate education and rescue medications to quickly respond to a child in respiratory distress.

Priority health topic: Wellness – Mental Health

Goals/strategies from the 2018 implementation plan: Improve access to services for child mental health and well-being through (1) increasing awareness about children's mental health issues in Denton County and (2) increasing access to quality services for mental health issues in Denton County.

Community Awareness and Increased Access to Quality Services

- Developed and hosted continuing education workshops based on evidence-based practices for mental health professionals, drawing an international audience for the topics covered with a new virtual platform.
- Organized an annual countywide art contest with 18 public libraries and other community partners to provide a creative outlet for children and teens to express their emotions through art (held virtually in 2020 and 2021).
- Supported the award-winning "Okay to Say" public awareness campaign in Denton County with multiple community partners. The campaign was initiated to open honest conversations about mental health between trusted family members, friends and other loved ones.
- Hosted a community website (www.watchdenton.org) to provide information about mental health issues and resources for children, parents and professionals.

Priority health topic: Wellness – Healthy Lifestyles (Obesity Prevention)

Goal/strategy from the 2018 implementation plan: Increase access to wellness activities for children through facilitating community-driven healthy lifestyles initiatives in Johnson and Parker counties.

5210 and Community Gardens

- Continued partnering with schools to present a national evidence-based curriculum (5210) to promote healthy lifestyles.
- Continued providing structure and support in partnership with community partners to implement school gardens or micro-gardening opportunities for children in elementary schools.

Priority health topic: Wellness – Parenting Support

Goals/strategies from the 2018 implementation plan: Increase the support network for parents and families through (1) sustaining and growing parent support initiatives in Hood and Wise counties and (2) improving capacity of community professionals to provide support to parents.

Parent Cafés

- Sustained Parent Café programs in Hood and Wise counties offering a national evidence-based curriculum facilitated by volunteers to promote healthy parenting practices. Café sessions transitioned from in person to virtual and back to in person as needed.
- Added additional Parent Café site partners and trained additional Parent Café facilitators.
- Provided support to local nonprofit organizations to address urgent family needs following a winter weather event in February 2021.
- Created three short videos highlighting key Parent Café messages from participants to help increase awareness for other parents.
- Initiated and hosted School Counselor Roundtable discussions regularly with all school districts in Wise County.

Priority health topic: Wellness – Access to Health Care

Goals/strategies from the 2018 implementation plan: Increase access to pediatric medical care for children in Tarrant County through (1) increasing primary care services to children of families in temporary shelters and sustaining those services as their medical home after leaving the shelter and (2) supporting access to immunizations for low-income families.

Homeless Initiative

- Continued supporting the Homeless Initiative led by the Cook Children's Case Management Department to help families in Tarrant County shelters find and sustain a medical home for their children.

Immunization Collaboration of Tarrant County

- Continued support for this collaboration of over 40 public and private organizations committed to providing the systematic eradication of childhood, adolescent and adult vaccine-preventable diseases in Tarrant County. Low-cost vaccines are provided to more than 7,000 children, teens and adults

annually. Community awareness, outreach and education on the importance of immunizations is provided to more than 20,000 people every year.

Priority health topic: Oral Health

Goals/strategies from the 2018 implementation plan: Improve child oral health through (1) sustaining improvements in oral health disease for Tarrant County children; (2) increasing access to oral health screening and treatment through coordinated care; and (3) increasing access to dental health education and services through providing education to children and families and supporting key community partners in providing education to the families they serve.

Save a Smile

- Revamped the process for safely conducting limited oral health evaluations in 19 target schools to identify children with severe dental disease.
- Connected children to dental care through social support services, including transportation to dental appointments, translation services and referrals to community resources for meeting basic needs, such as food and rental assistance.
- Almost 100 volunteer dentists continued providing free, comprehensive dental treatment to children with severe dental disease who have limited resources and access to care.
- Provided school-based and video-platform oral health education to elementary school students and created a toolkit for teachers to use when the pandemic limited access to schools.
- Hosted safe teeth cleaning events in partnership with the Tarrant County College Dental Hygiene Program.
- Celebrated two major milestones in fiscal year 2021, reaching more than 100,000 dental screenings and providing more than $10 million in donated dental care for children in need in the 18-year history of the program.

Children's Oral Health Coalition

- Pivoted to remote kit assembly events, engaging more than 20 different community groups to create oral health kits for children at Title 1 schools in Tarrant County and surrounding areas.
- In collaboration with community partners, distributed oral health kits, prevention tools and educational resources throughout the service area.
- Trained community ambassadors to educate caregivers about good oral health practices for young children.
- Sustained the Coordinated Care for Pregnant Teens + Women (CC4PT+W) initiative to address barriers to oral health care during pregnancy.
- Initiated a unique local and statewide effort to build interprofessional collaboration between medical and dental providers. Partnered with the Texas Department of State Health Services to host "Ask the Docs" sessions to engage medical and dental providers.
- Conducted virtual parent education sessions, engaging both parents and partners. The collaborative support for the CC4PT+W initiative has grown to 56 dentists, physicians and community partners.

Priority health topic: Injury Prevention

Goals/strategies from the 2018 implementation plan: Prevent accidental injuries to children through (1) sustaining the Lifeguard Your Child region-wide campaign to support evidence-informed strategies and uniform messaging for drowning prevention; (2) reducing the likelihood of drownings for children most at risk by providing education to families and children in collaboration with community partners; (3) improving child passenger safety for children through distribution of car seats and seat installation trainings for parents; (4) expanding regional capacity to improve child passenger safety through serving as the regional training and certification location for car seat technicians; (5) increasing the reach of family education about practices for safe disposal, safe storage and safe dosing for medicine and other household poisons in collaboration with community partners; (6) increasing families' use of practices for safe disposal, safe storage and safe dosing for medicine and other household poisons; (7) increasing families' understanding of the importance of safe gun storage practices in collaboration with community partners; and (8) increasing awareness of safe sleep environments for families and community organizations.

Drowning Prevention

- Continued leading the Lifeguard Your Child campaign, an initiative that supports community partners in practicing evidence-informed strategies and unified messaging. Strategies include creating city-based planning committees, distributing water-watcher tags, connecting families to water safety lessons, providing community education, and connecting on social media. The campaign also offers an online Water Safety Club resource for parents and children.
- Added six new loaner life jacket stations at area lakes; continued to distribute loaner life jackets to existing and partner stations at lake entry points across nine counties.

Child Passenger Safety

- Continued hosting virtual and in-person options for families to receive education and the appropriate car seat. Sessions are led by a certified technician, and families receive their free car seat at a contactless pickup appointment. Also continued offering car seat inspections and added virtual options for this service.
- Provided the National Child Passenger Safety Technician training to community members and organizations to expand our region's capability to teach families how to transport children safely.

Poison Prevention

- Trained providers and community ambassadors to provide parent education about poison prevention while distributing medication lockboxes, cabinet locks and educational materials.
- Promoted safe dosing through distributing medication schedules, educational resources and pharmacy bags with the SAFE and SOUND pain management message for prescriptions filled at the Cook Children's pharmacy.
- Continued poison prevention social media regarding key poison prevention messages, which are accessible from the Cook Children's website.
- Partnered with the local division of the Drug Enforcement Agency Take Back Event to collect unused medication and updated the MedDropBox.org website with 100 drop box sites across the region to offer families a convenient way to practice safe disposal.

Gun Safety

- Developed an innovative approach to gun safety with an interactive, educational in-store artificial reality platform due for piloting in late 2021 with customers purchasing a firearm and their children.
- Safe Kids North Texas-Fort Worth established a Gun Safety Action Team meeting for partners committed to collaboration beyond coalition meetings.
- To raise awareness, Dan Guzman, M.D., and gun safety champions presented to clinical providers, community partners and conference attendees, reaching hundreds of local and national partners.
- To promote safe storage and prevent firearm injuries, the team distributed cable gun locks, gun safes and educational resources (in English and Spanish) to families.

Safe Baby Sleep Council

- Led community partner members of the Safe Baby Sleep Council to develop a strategic plan designed to promote safe baby sleeping practices through uniform hospital policies, community practices, distribution of safe sleeping items, and standardized staff training and caregiver education.
- Developed and distributed evidence-informed educational materials; partnered with Tarrant County to send educational materials on safe baby sleeping, with birth certificates requested for children birth to 12 months of age.
- Hosted a virtual Safe Baby Sleep Symposium featuring public health officials and health care professionals; also hosted virtual speaker's bureau trainings to equip partners with the skills and resources to educate parents.

Priority health topic: Collaboration

Goal #1/strategies from the 2018 implementation plan: Engage communities to act upon child health issues through (1) sustaining membership in community coalitions that increase target population reach for issue-specific programming throughout the six-county region and exploring ways to increase the capacity and sustain the work with these coalitions long term; and (2) sustaining the CHNA and Community-wide Children's Health Assessment and Planning Survey as a means to monitor and address children's health issues within our six-county service region.

Goal #2/strategies from the 2018 implementation plan: Foster an increasing awareness about child health issues through sharing region-wide CHNA findings and child health issues in regional, state and local venues; (2) seek opportunities and accept invitations to present the CHNA findings and child health issues in national, regional, state and local venues; and (3) publish and distribute awareness/education materials and safety tools on children's health priority issues.

Community Engagement

- The Center for Children's Health continues to lead 10 coalitions according to practices recommended in research to facilitate successful community efforts. These collaborations substantially increase target population reach and effectiveness. We work with nearly 400 community organizations to improve children's health and engage 580 individual volunteers and 275 group volunteers who invest more than 3,000 hours of service each year. Current coalitions led by Cook Children's are as follows:
  - ACEs Task Force
  - Children's Oral Health Coalition
  - Healthy Children Coalition for Parker County

- Hood County for Healthy Children
- Johnson County Alliance for Healthy Kids
- Safe Baby Sleep Council
- Safe Kids North Texas-Fort Worth
- Save a Smile Advisory Committee
- Wellness Alliance for Total Children's Health of Denton County
- Wise Coalition for Healthy Children

Increasing Awareness About Child Health Issues

- The Center's Evaluation Team expanded the CHNA methodology in 2021 to include a parent survey, a community leader survey, additional secondary data sources, focus groups, community leader interviews, and interviews with families residing in homeless shelters or motels. The CHNA process has evolved into an important tool for engaging community partners and leveraging community assets throughout the region. Presentations of the 2018 CHNA findings were shared with all coalitions led by Cook Children's and were used to guide program efforts. Presentations to other organizations and special requests for data were also provided upon request.
- Developing and distributing evidence-informed educational resources and prevention tools that are designed to be easily read, used and understood is a hallmark of all coalitions and programs within the Center for Children's Health. The Center's resources are generally provided in English and Spanish, in hard-copy format, on our website (www.centerforchildrenshealth.org) and on social media. Approximately 500,000 prevention tools and educational resources are distributed annually, more than 700 health outreach events are hosted annually, and more than 200 community partner events are supported every year.

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APPENDIX A

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APPENDIX B

Eight-County Parent Survey

The survey instrument is available upon request or can be found on our CHNA dashboard.

Sampling

- The sample was stratified to ensure the goals for each of the 14 sampling areas would be obtained.
- The sample was selected at random from households that are likely to have children under age 18.
- ETC Institute utilized InfoGroup as the primary source of the sample.
- The sample was address based. This means that each residential household (house, condo, apartment, mobile home) had an equal probability of being selected.
- The number of households selected for the survey was initially five times the goal for each area.
- For example, the goal for Parker County was 300 completed surveys, so 1,500 households were selected from Parker County.
- ETC Institute oversampled respondents in hard-to-reach areas and/or among demographic groups that are less responsive as needed.

Administration

ETC Institute mailed the survey and a cover letter to each of the households selected for the survey:

- The survey included a letter that explained the purpose of the survey.
- The letter also listed the website for the online version of the survey for those wishing to complete the survey on the internet.
- Even if residents did not respond to the mailed version of the survey, sending the survey prior to contacting residents by phone/email increased the response rate because residents knew the survey was legitimate.

Residents who received the survey initially had the option of completing it in one of the following three ways:

- By **mail** using a postage-paid return envelope, included with the survey.
- By going **online to a website**; the website was printed on the survey.
- By **calling a toll-free number**, which was printed on the survey. ETC Institute provided interviewers who answered inbound calls from residents who preferred to complete the survey by phone in English or Spanish.

ETC Institute followed up with households that did not respond to the survey to maximize participation in the survey as follows:

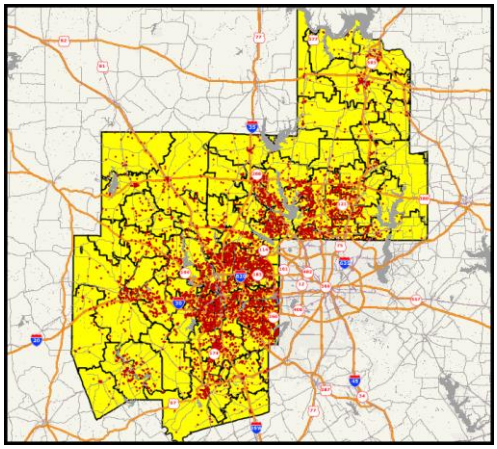
- Sent emails to households for whom email addresses could be obtained. The emails contained a link to the online version of the survey.
- Called households and left voice messages about the survey with households that did not answer their phones.
- Gave those who did not answer their phones an opportunity to complete the survey by phone in both English and Spanish.

ETC Institute conducted follow-ups by phone and email until each of the sampling goals were met and a minimum of 5,350 surveys were completed. ETC Institute monitored the distribution of the sample to ensure that the sample reasonably reflected the demographic composition of the eight-county service area.

Distribution of Respondents in Eight-County Parent Survey

Survey Distribution Numbers

County	Goal for Completed Surveys	Completed Surveys
Collin	400	515
Denton	1,000	1,016
Grayson	200	200
Hood	150	151
Johnson	400	475
Parker	400	438
Tarrant	2,600	2,713
Wise	200	207
Total	**5,350**	**5,715**

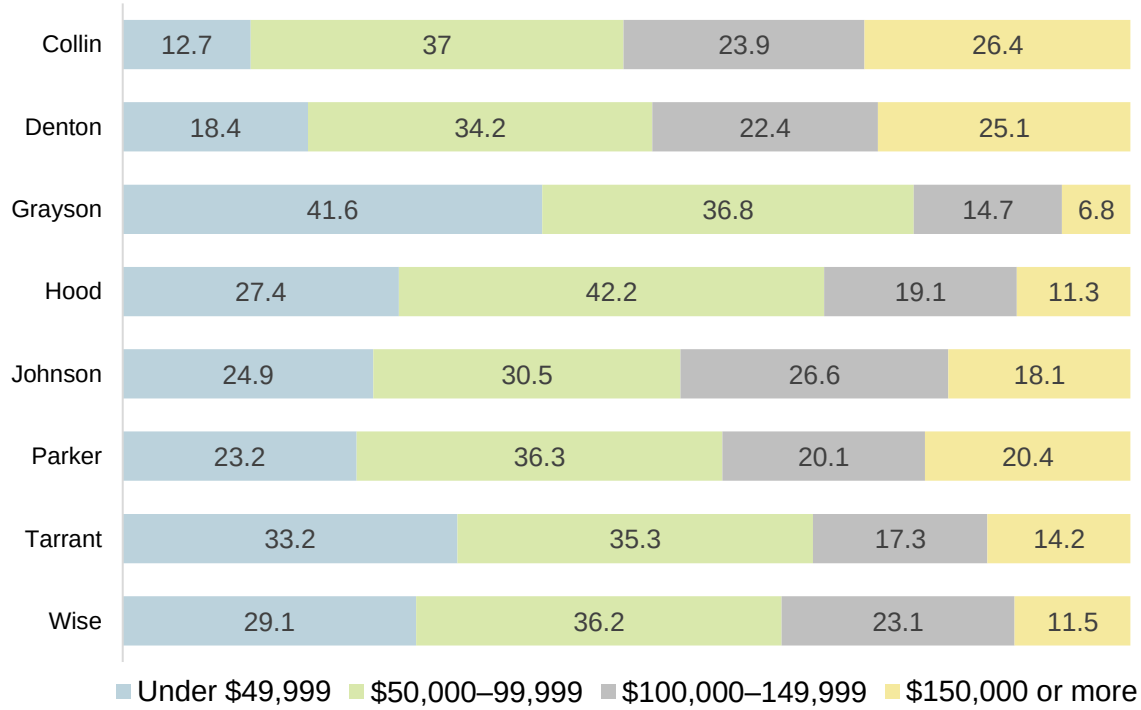


Survey Distribution in the Eight-County Service Area

Weighting and Representation of Parent Survey Results

The parent survey data was expanded to match 2021 census estimates for the 1,269,810 children under age 18 living in the eight-county service area with regard to age, race, income, Hispanic ancestry and gender. According to 2019 American Community Survey five-year estimates, the median family income of households with children for each county in the eight-county service area is as follows: Collin, $117,935; Denton, $109,165; Grayson, $63,311; Hood, $83,382; Johnson, $70,593; Parker, $98,079; Tarrant, $71,782; and Wise, $73,000. The graph below demonstrates weighted income levels of households with children by county according to parents completing the survey.

Weighted household income of 2021 parent survey respondents by county



The CHNA eight-county parent survey methodology also included oversampling in counties with lower populations and weighting the results by ZIP code to ensure that geographic distribution of the survey sample was comparable to the actual distribution of the eight-county population. The table below includes a comparison of the race and ethnicity of survey respondents' children with U.S. census estimates.

Comparison of parent-reported child race and ethnicity with U.S. census estimates

	Hispanic		White, Non-Hispanic		Black, Non-Hispanic		Asian, Non-Hispanic		Other/Multi-race*, Non-Hispanic	
	Census	Weighted Results	Census	Weighted Results	Census	Weighted Results	Census	Weighted Results	Census	Weighted Results
Collin	15.5%	15.9%	55%	51.5%	10.3%	8.1%	16.2%	16.8%	0.5%	7.8%
Denton	19.6%	20.5%	57.6%	56%	9.9%	7%	9.6%	7.8%	0.5%	8.7%
Grayson	14.2%	14.4%	74.6%	73.9%	6%	2.3%	1.7%	0.5%	0.5%	8.9%
Hood	12.4%	12.6%	84.2%	84%	0.8%	0%	0.7%	0%	1%	3.4%
Johnson	7.9%	8.1%	79.3%	79.1%	4.7%	2.4%	5.2%	2.8%	0.2%	7.5%
Parker	13%	13.1%	82.6%	82.4%	1%	0.4%	0.7%	0.3%	0.5%	3.8%
Tarrant	29.5%	30%	45.2%	43.6%	16.8%	14.2%	5.6%	5.3%	0.8%	6.8%
Wise	19.3%	19.5%	76.8%	75.4%	1.3%	0.6%	0.5%	0.2%	0.6%	4.4%
Homeless & Undocumented	N/A	47%	N/A	14%	N/A	29%	N/A	1%	N/A	9%

*Other/Multi-race: Non-Hispanic children whose parent or caregiver did not solely select white, Black or Asian on survey

Community Leader Survey

The survey instrument is available upon request or can be found on our CHNA dashboard.
Survey respondents' selected roles within the community and primary county are located in the tables below.

Role in Community

Business	8.2%
Clergy/Religious/Faith Based	4.2%
Community Volunteer	9.5%
Educator/School Official	15.4%
Elected Official	5.6%
Government Employee/Public Health	12.7%
Medical/Dental/Mental Health Professional	31%
Social Services/Nonprofit	27.5%
Other	3.3%

Primary County

Collin	5.9%
Denton	11.1%
Grayson	16%
Hood	7.8%
Johnson	5.6%
Parker	7.2%
Tarrant	41.2%
Wise	5.2%

APPENDIX C

Community Leader Interview Protocol

Purpose: Conduct qualitative interviews to collect information from a wide range of community leaders with firsthand knowledge about the community. During these interviews, interviewer may also:

- Discover information about a pressing issue or problem in the community.
- Understand individual or community motivation and beliefs on a particular issue.
- Discuss sensitive topics, with candid in-depth discussion of the topic.

Selecting Key Informants: Please select two to three interview candidates from the assigned county or counties. Ideal interview candidates will have firsthand knowledge about the specified community, its residents, and issues or problems. Candidates may also:

- Represent a diverse community, agency, business or faith-based organization.
- Have diverse backgrounds or ecosystems to collect information from various perspectives.

Scheduling Key Informant Interviews: After identifying ideal candidates, initiate contact and provide a brief explanation of the CHNA process. Also:

- Encourage participation in the interview because of their expertise.
- Communicate the importance of their input and let them know about the time commitment.
- Avoid scheduling too many interviews in one single day or back-to-back.
- After each interview, take time to finalize your notes and identify key themes.

Timing and Logistics:

- Interviews may take 30 minutes, perhaps longer if informant wants to speak longer.
- Interviews should be conducted by Zoom only.
- Due to a recent update to the Cook Children's policy, do not record Zoom interviews.

Conducting Key Informant Interviews: As an interviewer, you must provide a comfortable, safe atmosphere for the informant to provide answers and, if needed, in-depth explanations of answers.

Documentation: Plan to take notes during the interview as well as directly after.

- Utilize the Community Leader Survey template to record responses and comments.

Introduction: Before beginning the interview:

- (Re)introduce yourself and the purpose of the interview as part of the Cook Children's CHNA.
- You'll ask questions from the Community Leader Survey and clarifying questions if needed.
- Explain their responses will be used anonymously to benefit their communities.

Instrument & Probing Questions: Use the 2021 Community Leader Survey as a question template:

- Clarify respondents' comments and thoughts with "why" questions.
- Be mindful not to influence or bias respondents' answers.
- Listen carefully for recurring and new themes, opinions or concerns.

Closing question: Ask for any additional information, recommendations or comments.

Summarize: If time allows, quickly summarize major comments and ask if you:

- Covered all the major points.
- Should include anything else that you have not asked.

After Interview: Thank them for their time:

- Immediately after the interview, take time to review and finalize your notes.
- Be sure to clarify your notes and key themes for subsequent qualitative analysis.
- Send a follow-up thank-you after the interview.
- Send your completed interview templates to _____.

Focus Group Overview

Focus groups were conducted by the University of North Texas Health Science Center, School of Public Health.

Logistics

- In April of 2021, six focus groups and one interview were conducted, involving a total of 22 parents/caregivers. Focus group participants were from Tarrant, Denton, Wise, Parker, and Johnson counties.
- The research team shared a prompt and asked the group — made up of parents and caregivers — to discuss topics related to children's health and healthcare.
- Focus groups were about 90 minutes each in length.
- They were audio recorded through Zoom.
- Participants were given either a Walmart or Target gift card for participation.

Participant Enrollment

- Cook Children's helped to refer parents in their community networks to participate in the focus groups.
- Announcements were shared via email with local partners.
- Parents and caregivers from all eight counties were invited to participate.

Questions/Content

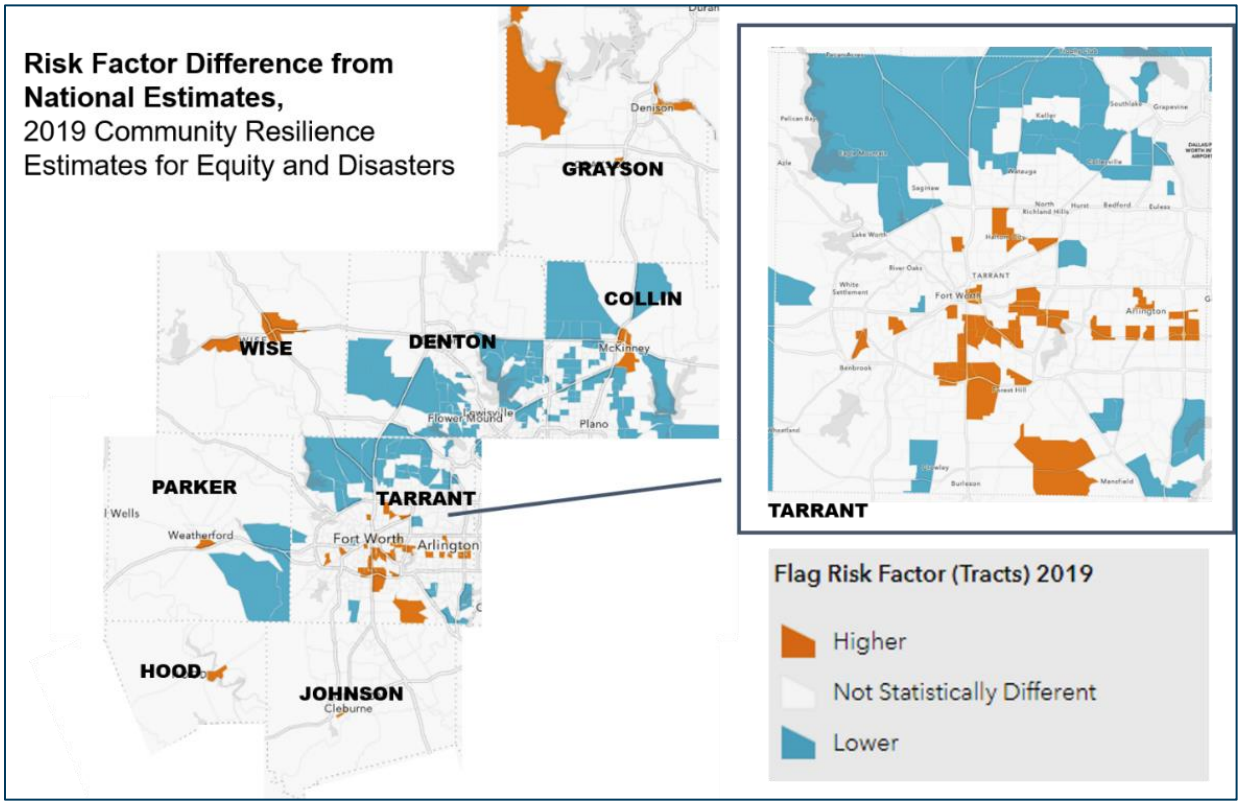
- Each focus group was framed within the social determinants of health framework, which seeks to understand the social and economic contributors to health.
- Each focus group then had a specific topic area for discussion.
    - Within the area of physical and oral health, parents discussed nutrition, physical activity, and dental care.
    - In the safety and wellness focus groups, parents discussed safety and injury prevention and also abuse and neglect prevention.
    - One focus group was around mental health and interactions with the mental healthcare system.
    - The final focus group topic was asthma.
- In all focus groups and interviews, parents discussed the impact of COVID-19 on children's health and healthcare.
- The questions and discussion started broadly, with questions about overall health needs and access to care issues.
- For each specific topic area the needs, resources and services available in the local community, barriers to care, sources of information about the topic, and methods of prevention were also discussed.

APPENDIX D

The Community Resilience Estimates (CREs) are developed by the U.S. Census Bureau with information on individuals and households from the 2018 American Community Survey (ACS) and the Census Bureau's Population Estimates Program (PEP) as well as publicly available health condition rates from the National Health Interview Survey (NHIS). Data is available for states, counties and census tracts. CREs identify high-risk geographical areas with equity gaps and difficulty enduring the pandemic based on the percentage of the population with three or more risk factors:

- Low-income household
- Single or no caregiver household
- Lack of health insurance
- Employment status
- Household communication barrier
- Physical crowding
- Respiratory disease
- Heart disease
- Diabetes
- Disability status
- Age 65 or older

Map of Risk Factor Difference for the Eight-County Service Area



Source: US Census Bureau. (2021, October 8). *Community Resilience Estimates*. United States Census Bureau. Retrieved January 10, 2022, from https://www.census.gov/programs-surveys/community-resilience-estimates.htm

APPENDIX E

Key Initiatives:

- Child passenger safety training and certification; parent education and car seat distribution events.
- Drowning prevention campaign.
- Gun safety research and community programming.
- Safe gun storage program.
- Early detection of child abuse and neglect training.
- In-home asthma education and trigger remediation program.
- Mental health educational workshops and youth art contest.
- Nutrition and physical activity education.
- Oral health education, treatment, and kit assembly and distribution.
- Parenting education and support.
- Safe baby sleep education.
- Train the Trainer programs for poison prevention and oral health.

The Center for
Children's Health
led by Cook Children's

Community Collaborations:

- Adverse Childhood Experiences Task Force
- Children's Oral Health Coalition
- Healthy Children Coalition for Parker County
- Healthy Homes Asthma Program
- Hood County for Healthy Children
- Johnson County Alliance for Healthy Kids
- Safe Baby Sleep Council
- Safe Kids North Texas-Fort Worth
- Save a Smile
- Wellness Alliance for Total Children's Health of Denton County
- Wise Coalition for Healthy Children

Fiscal Years 2019–2021 by the Numbers

Engaged **119,320** children, families and community partners through outreach events and trainings

Supported **903** community partner events

Distributed **1,421,828** prevention tools and educational/support resources at a value of **$1,291,424**

Coordinated over **3,000** volunteers*

Received **14,345** hours of volunteer support totaling a value of $109,046

Led **2,112** health outreach events

Partnered with **Nearly 400** community organizations

Provided **12,260** support services and **1,329** community referrals to families, meeting needs around food, rent and utilities assistance; school supplies; and mental health

Source: The Center for Children's Health Community Benefit Measures Reports for FY2019–FY2021.
*May be duplicated.