KIDS COUNT

The State of the Child in Tennessee
2016

Economic Well-Being
Education
Health
Family & Community
KIDS COUNT
The State of the Child in Tennessee

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Dear Reader:

The Tennessee Commission on Children and Youth (TCCY) is pleased to present *KIDS COUNT: The State of the Child 2016*. This report includes data on the well-being of children in Tennessee. As the Annie E. Casey Foundation’s KIDS COUNT partner in Tennessee, TCCY is proud to engage in and support data-driven advocacy for policies and programs that improve outcomes for Tennessee children and families and enhance the state’s future economic development and prosperity.

This report examines statewide data in four domains affecting child well-being: Economic Well-Being, Education, Health, and Family & Community. Each has a section explaining its importance to the well-being of children and examining the indicators that TCCY uses to represent that domain in its Index of Child Well-Being. The report also includes a section on early child development and the effects of Adverse Childhood Experiences (ACEs) during those very important early years.

A profile of each county, along with its rank on TCCY’s Index of Tennessee Child Well-Being, was released concurrently with this report and is available on the agency website at [http://tn.gov/tccy/topic/kc](http://tn.gov/tccy/topic/kc). The data presented in this report are also available at the KIDS COUNT Data Center, which is an incredibly easy to use resource open to anyone. In addition to a link to the Data Center, this report also includes a section explaining ways to use the information found there. Data can be sorted in a variety of ways to create custom profiles for individual counties, or to create maps, line graphs or bar charts comparing counties within Tennessee, or Tennessee to other states. The data center includes a wealth of information about the well-being of Tennessee children and families and children across the nation.

The Tennessee Commission on Children and Youth’s members, staff, and regional council members advocate for children and families to achieve the agency vision:

All children in Tennessee are safe, healthy, educated, nurtured and supported, and engaged in activities that provide them opportunities to achieve their fullest potential.

Statistics posted on the KIDS COUNT Data Center ([www.datacenter.kidscount.org](http://www.datacenter.kidscount.org)) are important resources for efforts by TCCY and service providers, advocates and decision-makers across the state. We all know Tennessee’s future prosperity depends on what we do for our children today – the workforce and parents of tomorrow. We encourage all Tennesseans to come together through the Regional Councils on Children and Youth and other organizations to work with TCCY in data-driven efforts for a bright future for the state and for children and families.

Sincerely,

[Signature]

Executive Director
Tennessee Commission on Children and Youth
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Sources and definitions for indicators in this publication are available at datacenter.kidscount.org as well as on the TCCY website at tn.gov/tccy/topic/kc

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Tennessee

Individual county profile sheets for all 95 counties include overall rank, rank in each domain, and rank on each indicator. These are available on our website at http://www.tn.gov/tccy/article/tccy-kc-soc16-counties

Child Population by Race/Ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, Including Hispanic</td>
<td>75.4%</td>
</tr>
<tr>
<td>Black, Including Hispanic</td>
<td>21.7%</td>
</tr>
<tr>
<td>Native American/Alaskan</td>
<td>0.6%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>2.3%</td>
</tr>
<tr>
<td>Hispanic, All Races</td>
<td>8.9%</td>
</tr>
</tbody>
</table>

HEALTH

- Low Birth Weight Babies: 9.1%
- Child and teen deaths: 29.7 per 100,000
- Children without health insurance: 4.2%

ECONOMIC WELL-BEING

- Child Poverty: 24.1%
- Median Household Income: $47,243
- Fair Market Rent: $874

FAMILY and COMMUNITY

- Teen pregnancy: 13.9 per 1,000
- School suspension rate: 5.0%
- Substantiated Abuse and Neglect: 5.9 per 1,000

EDUCATION

- Third to Eighth grade reading proficiency: 48.4%
- Third to Eighth grade math proficiency: 55.6%
- High school graduation rate: 87.8%
TCCY Index of Child Well-Being

Counties by Quintile

Counties in Rank Order

<table>
<thead>
<tr>
<th>Quintile 1</th>
<th>Quintile 2</th>
<th>Quintile 3</th>
<th>Quintile 4</th>
<th>Quintile 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Williamson</td>
<td>Smith</td>
<td>Jefferson</td>
<td>Jackson</td>
<td>Rhea</td>
</tr>
<tr>
<td>Weakley</td>
<td>Sullivan</td>
<td>Hawkins</td>
<td>Monroe</td>
<td>Marion</td>
</tr>
<tr>
<td>Wilson</td>
<td>Knox</td>
<td>Cumberland</td>
<td>Cheatham</td>
<td>Hardeman</td>
</tr>
<tr>
<td>Rutherford</td>
<td>Henry</td>
<td>Fentress</td>
<td>Unicoi</td>
<td>Meigs</td>
</tr>
<tr>
<td>Sumner</td>
<td>Crockett</td>
<td>Bradley</td>
<td>Giles</td>
<td>Pickett</td>
</tr>
<tr>
<td>Moore</td>
<td>White</td>
<td>Maury</td>
<td>Sevier</td>
<td>Cocke</td>
</tr>
<tr>
<td>Lincoln</td>
<td>Dyer</td>
<td>Humphreys</td>
<td>Benton</td>
<td>Davidson</td>
</tr>
<tr>
<td>Montgomery</td>
<td>Dickson</td>
<td>Obion</td>
<td>Grainger</td>
<td>Bledsoe</td>
</tr>
<tr>
<td>Washington</td>
<td>Marshall</td>
<td>Houston</td>
<td>Carter</td>
<td>Hancock</td>
</tr>
<tr>
<td>Lawrence</td>
<td>Roane</td>
<td>Trousdale</td>
<td>Lauderdale</td>
<td>Macon</td>
</tr>
<tr>
<td>Henderson</td>
<td>Putnam</td>
<td>McNairy</td>
<td>Wayne</td>
<td>Campbell</td>
</tr>
<tr>
<td>Blount</td>
<td>Hamblen</td>
<td>Hamilton</td>
<td>Lewis</td>
<td>Fayette</td>
</tr>
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<td>Tipton</td>
<td>Robertson</td>
<td>Coffee</td>
<td>Claiborne</td>
<td>Morgan</td>
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<td>Carroll</td>
<td>Overton</td>
<td>Bedford</td>
<td>Hardin</td>
<td>Grundy</td>
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<td>Stewart</td>
<td>Greene</td>
<td>Cannon</td>
<td>Van Buren</td>
<td>Sequatchie</td>
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<tr>
<td>Franklin</td>
<td>Perry</td>
<td>McMinn</td>
<td>Warren</td>
<td>Clay</td>
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<tr>
<td>Decatur</td>
<td>Johnson</td>
<td>Anderson</td>
<td>Scott</td>
<td>Union</td>
</tr>
<tr>
<td>Chester</td>
<td>Loudon</td>
<td>Madison</td>
<td>Haywood</td>
<td>Lake</td>
</tr>
<tr>
<td>Gibson</td>
<td>Hickman</td>
<td>Polk</td>
<td>DeKalb</td>
<td>Shelby</td>
</tr>
</tbody>
</table>
The future prosperity of any society depends on its ability to foster the health and well-being of the next generation. When Tennessee invests wisely in children and families, the next generation will pay that back through a lifetime of productivity and responsible citizenship.

The early years of life matter because the basic architecture of the human brain is constructed through an ongoing process that begins before birth and continues into adulthood. Like the construction of a home, the building process begins with laying the foundation, framing the rooms and wiring the electrical system in a predictable sequence. Early experiences literally shape how the brain gets built, establishing either a sturdy or a fragile foundation for all of the development and behavior that follows. A strong foundation in the early years increases the probability of positive outcomes. A weak foundation increases the odds of later difficulties, and getting things right the first time is easier than trying to fix them later.

The interactive influences of genes and experience shape the developing brain. The active ingredient is the “serve and return” relationships children have with their parents and other caregivers in their family or community. Like the process of serve and return in games such as tennis and volleyball, young children naturally reach out for interaction. This process starts in infancy – with facial expressions and babbling – and continues throughout the early years. If adults do not respond by getting in sync, the child’s learning process is incomplete. This has negative implications for later learning. But when children develop in an environment of relationships that are rich in responsive, back-and-forth interactions, these brain-building experiences establish a sturdy architecture on which future learning is built.

Just as a rope needs every strand to be strong and flexible, child development requires support and experiences that weave many different capacities together. Cognitive, emotional and social capacities are tightly connected in the brain. Language acquisition, for example, relies on hearing, the ability to differentiate sounds, and the ability to pay attention and engage in social interaction. Science therefore directs us away from debating which kinds of skills children need most, and toward the realization that they are all intertwined.

Science also points us to pay attention to factors that can disrupt the developmental periods that are times of intense brain construction, because when this activity is derailed, it can lead to lifelong difficulties in learning, memory and cognitive function. Stress is an important factor to consider. Everyday challenges, like learning to get along with new people or in new environments, set off a temporary stress response that helps children be more alert while learning new skills. But true Adverse Childhood Experiences – severely negative experiences such as the loss of a parent through illness, death or incarceration; abuse or neglect; or witnessing violence or substance abuse – can lead to a toxic stress response in which the body’s stress systems go on “high alert” and stay there. This haywire stress response releases harmful chemicals into the brain that impair cell growth and
Science tells us that many children’s futures are undermined when stress damages the early brain architecture. But the good news is that potentially toxic stressors can be made tolerable if children have access to stable, responsive adults – home visitors, child care providers, teachers, coaches, mentors. The presence of good serve-and-return acts as a physical buffer that lessens the biological impact of severe stress.

The factors children are exposed to affect how well they progress, and communities play a big role. A child’s well-being is like a scale with two sides; one end can get loaded with positive things, while the other end can get loaded with negative things. Supportive relationships with adults, sound nutrition and quality early learning are all stacked on the positive side. Stressors such as witnessing violence, neglect or other forms of toxic stress are stacked on the other. This dynamic system shows us two ways we can achieve positive child outcomes: to tip to the positive side, we can pile on the positive experiences, or we can offload weights from the negative side. Children who have experienced several ACEs are carrying a heavy negative load, and to tip these children toward the positive, innovative states and communities have been able to design high-quality programs for children to prevent Adverse Childhood Experiences whenever possible, and respond to them with strong, nurturing supports to ameliorate their impact when they can’t be prevented. These programs have solved problems in early childhood development and shown significant long-term improvement for children.

As Tennesseans understand the impact of Adverse Childhood Experiences, they will realize the future economic development and prosperity of the state depends on what we do now to prevent these experiences whenever possible and to wrap services around children and families when they can’t be prevented. There will be better collaboration across disciplines, departments, agencies and communities, and focus on the infrastructure of services and supports that make a difference. When child abuse and domestic violence prevention, home visiting, mental health and substance abuse services for parents, and a variety of other services and supports are available for early intervention, they put in place a preventive system that improves serve-and-return before it breaks down. This kind of sound investment in our society’s future is confirmed by brain science. It improves outcomes for children now, and is a significant foundation for solutions to many of the long-standing and nagging challenges we face as a state in our health, mental health, social services, child protection, and juvenile and criminal justice systems.

All children need someone in their corner. The shift from “What is wrong with you, or why are you a problem?” to “What has happened to you, and how can we support you and help you overcome these experiences?” will result in a more effective, more empathetic service delivery system and a stronger Tennessee.
Adverse Childhood Experiences (ACEs): The Connection between Childhood Toxic Stress and Adult Outcomes

Evidence increasingly points to a significant correlation between particular ACEs and poor adult outcomes in education, earnings and a variety of health issues. This connection was first made by researchers in the 1990s. The Tennessee Department of Health has previously examined ACEs in the state and reported on the initial ACEs study in their publication "Adverse Childhood Experiences in Tennessee: Fact not Fate." The Adverse Childhood Experiences (ACE) Study is a large-scale, ongoing research collaboration assessing the link between negative childhood experiences and negative adult outcomes. The study was initiated by Dr. Robert Anda and Dr. Vincent Felitti in 1995-1997 with more than 17,000 participants at Kaiser Permanente in San Diego, California in partnership with the Centers for Disease Control and Prevention (CDC). Each participant in the study had a physical examination and completed a confidential survey that contained questions about childhood maltreatment and family dysfunction as well as current health status and behaviors. Participants with exposure to early traumatic stressors, termed Adverse Childhood Experiences or ACEs, showed an increased risk for both short-term and long-term health and social problems (see figure 1). As the number of ACEs increased for each person so did the amount of risk in a number of categories, suggesting that vulnerability builds with each ACE exposure. Both the findings and ongoing assessment tell a compelling story about the relationship between childhood stress and the risk for a multitude of problems across the lifespan.¹

Through this study, researchers were able to identify 10 ACEs that correlated significantly with adult outcomes. Those are shown to the right in a graphic from the Robert Wood Johnson Foundation.² These ACEs create a harmful level of stress (known as toxic stress) in children that affects their brain structure at a time of rapid brain development. So why do some people with high ACE scores not have negative adult outcomes? Research shows that children who have safe, stable relationships with nurturing adults are more likely to avoid the negative outcomes that can accompany ACEs. They can develop resilience, which helps to mitigate the effects of ACEs.

Negative Adult Outcomes Correlated with ACEs

What are the negative adult outcomes that have been correlated with an increasing number of ACEs? Ace Interface developed a graphic showing the risk that is associated with childhood toxic stress. They depict the risk from ACEs as an oil spill in the middle, to show how it can spread and affect everyone but also to help visualize the idea that activities aimed at preventing and mitigating the effects of ACEs can act like a sponge to soak up the oil and reduce the harm ACEs can cause across the full spectrum of risk. Reducing ACEs reliably predicts simultaneous decrease in all these conditions.

Population Attributable Risk

The Centers for Disease Control and Prevention (CDC) estimate that the lifetime costs associated with child maltreatment rise as high as $124 billion. The largest cost is in lost productivity. Absence from work for sickness or mental health issues related to ACEs has a significant impact in business. Additional costs are incurred for health care, special education services, the child welfare programs that are called upon to serve these children and, too often, the criminal justice system that must absorb them when they grow older.
ACEs in Tennessee

Beginning in 2012, the Tennessee Department of Health added optional questions about ACEs to the annual Behavioral Risk Factor Surveillance System (BRFSS) survey conducted by the Centers for Disease Control and Prevention (CDC). These questions are aimed at identifying in Tennessee adults a history of eight of the ten ACEs. Physical and emotional neglect are not included as many adults do not have a good understanding of what qualifies as neglect and the survey questions are not an adequate place to define it. The Department of Health adds the caveat to this data that people who are homeless, in prison or who do not have telephones are not surveyed. These missed parts of the population likely lead to an undercount of ACEs overall.

The 2016 BRFSS included 5,979 people (of which 4,650 answered the ACEs questions) and provides an update of previous year’s data on the prevalence of ACEs among adults in Tennessee. Fewer than four in 10 Tennessee adults surveyed reported having none of the adverse experiences in the survey. More than one in six reported four or more ACEs in their childhood. The probability of negative adult outcomes often increases sharply at four or more ACEs.

通过数据在BRFSS中，更高的ACEs数量与特定的健康、教育和经济结果的关联可以被看到。
Not all of the health results were statistically significant (meaning that there is a 95 percent chance that the correlation is meaningful and did not occur randomly). Those that were significant are reported below.

**People Rating Their Health as Excellent or Good, by Number of ACEs, 2016**

<table>
<thead>
<tr>
<th>Number of ACEs</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>77.9%</td>
<td>75.1%</td>
<td>69.8%</td>
<td>70.2%</td>
<td>58.7%</td>
</tr>
</tbody>
</table>

**People Who Have a Provider They Think of as Their Doctor, by Number of ACEs, 2016**

<table>
<thead>
<tr>
<th>Number of ACEs</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>89.5%</td>
<td>86.9%</td>
<td>86.1%</td>
<td>82.1%</td>
<td>81.5%</td>
</tr>
</tbody>
</table>

**People Who Have Health Insurance, by Number of ACEs, 2016**

<table>
<thead>
<tr>
<th>Number of ACEs</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>94.5%</td>
<td>91.6%</td>
<td>90.0%</td>
<td>90.4%</td>
<td>85.5%</td>
</tr>
</tbody>
</table>

**People Who Meet the Definition of Obesity (BMI > 30), by Number of ACEs, 2016**

<table>
<thead>
<tr>
<th>Number of ACEs</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>27.2%</td>
<td>32.1%</td>
<td>33.5%</td>
<td>36.9%</td>
<td>39.9%</td>
</tr>
</tbody>
</table>

**People Who Use Alcohol, Smoke or Who Have Ever Had a Depression Diagnosis, by Number of ACEs, 2016**

- **Alcohol Use**
- **Smoking**
- **Depression Diagnosis**

<table>
<thead>
<tr>
<th>Number of ACEs</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Use</td>
<td>30.5%</td>
<td>39.6%</td>
<td>46.7%</td>
<td>50.9%</td>
<td>65.0%</td>
</tr>
<tr>
<td>Smoking</td>
<td>13.3%</td>
<td>18.7%</td>
<td>29.9%</td>
<td>33.6%</td>
<td>38.3%</td>
</tr>
<tr>
<td>Depression</td>
<td>11.1%</td>
<td>13.6%</td>
<td>17.9%</td>
<td>16.8%</td>
<td>16.6%</td>
</tr>
</tbody>
</table>

**People Who Have Been Diagnosed With Heart Disease, Asthma, COPD or Cancer, by Number of ACEs, 2016**

- **Heart Disease**
- **Asthma**
- **COPD**
- **Cancer**

<table>
<thead>
<tr>
<th>Number of ACEs</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>7.0%</td>
<td>11.1%</td>
<td>13.6%</td>
<td>15.3%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Asthma</td>
<td>10.0%</td>
<td>10.4%</td>
<td>11.3%</td>
<td>10.9%</td>
<td>12.3%</td>
</tr>
<tr>
<td>COPD</td>
<td>8.0%</td>
<td>13.6%</td>
<td>15.3%</td>
<td>12.1%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Cancer</td>
<td>6.8%</td>
<td>6.6%</td>
<td>6.6%</td>
<td>11.3%</td>
<td>12.3%</td>
</tr>
</tbody>
</table>
Families need adequate financial resources to make sure their children grow up safe, healthy, educated, nurtured and supported, and engaged in activities that help them reach their potential. One of the greatest barriers to strong families is poverty. Poverty makes it difficult for families to provide for children’s basic needs, including healthy food, quality child care and preventive health care. Poverty also increases stress on families and can contribute to depression, anger and impatience in parenting that create an environment of toxic stress for children and can increase the incidence of abuse.

While Adverse Childhood Experiences can and do occur in families at all income levels, poverty, and the stressors it brings, make them more likely. Economic well-being is an important part of the stability and security that contributes to healthy family relationships and positive outcomes for children.
Poverty is so much more than not being able to have many things. It is a constant, pervasive stress about meeting basic needs. It can mean worrying where you will sleep if your current situation falls through. It can mean living at various levels of functionality while dealing with mental illness and/or substance abuse. It can come from suffering a debilitating injury, or losing a spouse to an untimely accident or illness or to a prison term. It may surprise you in the form of unanticipated medical bills. Sometimes it means living in an area of concentrated poverty that lacks the resources to provide adequate services to its children and families, lacks access to enough decent jobs to support its residents, who may lack the resources to move. When children are dealing with these conditions, the lack of stability puts immense stress on them as they develop intellectually, socially and emotionally, and can have lifelong consequences.

The percent of children living in poverty in Tennessee ranges from 5.3 in Williamson County to 47.9 in Lake County. The map above shows some denser areas of rural poverty. Urban poverty does not always show in the data of heavily populated counties, as extremes within a county will average out to something in the middle. Shelby County, for instance, ranks 73 on this measure, which is low but not in the bottom quintile. Areas of heavily-concentrated poverty exist in Shelby County, but it also has affluent areas that counterbalance those. The same is true for all metropolitan areas in Tennessee.

Children’s ages also affect the likelihood they live in poverty. Before children reach school age, parents must provide supervision during the work week, usually by having a parent stay out of the labor force or by paying for child care. Either of these options affects family financial resources at the time that children are going through the most rapid brain development and have the greatest need for opportunities to socialize and learn. Research has shown poverty in early childhood is more closely associated with low rates of high school graduation than is poverty in the middle and high school years.
Median Household Income

Median household income (MHI) offers information that poverty measures and per capita income measures do not. When more households live below average income than above it, there tend to be wider gaps between wealthier households and poorer households. MHI can give a clearer picture of the typical family when income disparity is high. The Economic Policy Institute ranked Tennessee at 19 among the 50 states in income disparity. The average income of the top one percent of earners in Tennessee is over 20 times the average income of everyone else.3

Poverty is significant in the lives of children and families, but income-related stressors do not stop at the poverty line. Many programs have extended family qualification to 250 percent, or even 400 percent, of poverty level. Including an income measure that highlights differences among families both below and above the poverty line offers additional insight into differences across the state.

MHI can also vary significantly throughout the year in individual households. Research has shown that even households with moderate incomes can suffer from lack of stability in their monthly income. In Tennessee, parents had a low unemployment rate of just 5 percent in 2015, but fully a third of children lived in households where parents lacked secure employment.4

A recent study of hundreds of families tracked every transaction they engaged in from 2012 to 2014. One of the first findings was that even households with full-time workers saw fluctuations of up to one fourth above or below their average income in five months out of the year.4 Salaries that rely heavily on tips or commissions, seasonal employment, gaps in employment and irregular hours contributed to the instability.

Researchers concluded: “Fundamentally, the instability of households’ cash flows that we saw arises because families bear far more economic risk than they have in the past. Their jobs deliver less-steady income, even when they are full-time. They have less room between their incomes and their spending needs, and less ability to accumulate reserves. And employers and government do less to buffer individual families from the resulting ups and downs.”

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Fair Market Rent is a measure of housing burden. Generally, a family should not have to spend more than 30 percent of its income on housing. If they do, that is considered to be a high housing cost burden that squeezes the family’s ability to pay for other necessities. Since actual housing cost burden data is not available at the county level, Fair Market Rent is our closest approximation. It measures the fortieth percentile (forty percent are below this number) of the rent for three-bedroom housing in each county. It is used to determine eligibility of particular housing units for federal housing subsidies.

As is the case in most states, urban areas have higher housing cost burdens than more rural areas in Tennessee. The map above shows higher housing costs in the most populous counties as well as in the “collar counties” that surround them. This can be a particular problem for people who work lower-wage jobs in population centers. They either have to spend high percentages of their wages on housing or live further out and take on the difficulties and costs of a long commute. Most Tennessee counties are on the lower end of the state housing cost burden, but most of the state’s people live in areas with housing costs on the higher end. In the rural areas, there are few high-paying jobs, so even the lower rent levels can be challenging for many households.

**Number of Tennessee Counties by Fair Market Rent Level and Average Population of Each Group, 2015**

*Source: US Dept. of Housing and Urban Development and Tennessee Department of Health*
Education is a lifelong endeavor, from quality prenatal care through elementary and high school years and on into adulthood. The earliest years, while the brain is developing at lightning speed, lay the foundation for future success in school and in life. The adolescent years are also a time of growth and brain development. These middle years do not get as much attention as the first three to five years of life, but they are the second-most intense time of brain development. This is when executive function, impulse control, working memory, risk management and associative thinking are developed. The neural connections formed during puberty will be pruned and their functions strengthened up until about age 25. Children and teens spend a significant amount of time in school. They learn critical thinking skills and form important relationships there. School climate, learning philosophy and discipline practices can have a profound effect on child development.
As the saying goes, before third grade you learn to read; after third grade you read to learn. Reading proficiency is one of the most basic, yet most important, skills children acquire. In Tennessee, third- through eighth-grade students take state assessment exams (previously called TCAP, now called TNReady) to measure reading proficiency. Scores are rated as below basic, basic, proficient and advanced. Proficiency combines students in both the proficient and advanced groups. A more detailed look at scores and subgroups provides context to the basic proficiency measure.
Competence in mathematics is essential for functioning in everyday life, as well as for success in our increasingly technology-based workplaces. Students who take higher-level math courses, which require strong fundamental skills in mathematics, are more likely to attend and to complete college. Math education improves logical and critical thinking. The importance of math extends beyond the academic domain. Young people who transition to adulthood with limited math skills can find it difficult to carry out important independent-living tasks. Basic arithmetic skills are required for everyday computations, and sometimes for job applications. Additionally, competence in math skills is related to higher levels of employability.
Data consistently show that people who do not graduate from high school suffer higher unemployment rates and lower wages than people who do. College and technical school provide additional improvements on these measures. As a state, Tennessee has one of its highest rankings in the national KIDS COUNT data index on the high school graduation rate measure. Good public policies, like compulsory attendance to age 18, and a requirement that youth be in school to get a driver’s license before age 18, contribute to Tennessee’s achievement in this area. Governor Haslam’s Drive to 55 and Tennessee Promise programs provide incentives for higher graduation rates, as they provide tuition-free community college and college of applied technology training to all Tennesseans who have graduated or earned a high school equivalency. As with other education measures, systemic barriers facing children of color cause race to play a role, and risk factors associated with lower graduation rates among some groups of students show up as well.
Health

Counties by Quintile

Counties in Rank Order

Quintile 1  Quintile 2  Quintile 3  Quintile 4  Quintile 5
Weakley      Cumberland  Chester      McMinn      Benton
Williamson  Washington  Dyer         McNairy     Bledsoe
Lincoln      Campbell    Dickson     Johnson     Marion
Montgomery  White       Henderson   Haywood     Hardin
Roane       Putnam      Moore        Van Buren   Polk
Tipton      Jefferson   Bradley      Humphreys   Stewart
Smith        Carroll     Cannon      Fentress     Macon
Sullivan    Decatur     Carter       Marshall    Shelby
Knox        Wilson      Claiborne   Monroe      Lewis
Hawkins     Jackson     Robertson   Fayette     Crockett
Blount      Madison     Coffee       Warren      Union
Houston     Sumner      Giles        Wayne       Bedford
Overton    Lawrence    Lauderdale   Scott       Grundy
Hancock     Anderson    Davidson    Rhea        DeKalb
Franklin    Hamilton    Cheatham    Henry       Pickett
Rutherford  Hickman    Perry       Hardeman    Meigs
Cocke       Unicoi      Clay        Sevier      Sequatchie
Obion       Hamblen     Loudon      Trousdale   Lake
Greene      Gibson      Maury       Grainger    Morgan

Children who are not healthy struggle to learn in school, to develop relationships and to regulate their own behavior. From prenatal care to vaccines to regular checkups and dental visits, children need access to quality health care. Children also need a stable home, proper nutrition and strong relationships with nurturing adults to help them develop to their potential. Toxic stress from Adverse Childhood Experiences (ACEs), such as physical and emotional neglect or abuse, sexual abuse, loss of a parent through death, divorce or a prison sentence, or family dysfunction from domestic violence, substance abuse or mental health issues can affect a child’s health throughout their lives. The section on ACEs at the beginning of this report demonstrates the sometimes surprising connection between childhood toxic stress and adult health problems.
Percent of Children without Health Insurance

Children lacking health insurance are unlikely to get the regular, basic care they need to stay well and to grow into healthy adults. Lack of regular, preventive care can lead to untreated chronic conditions that affect children’s well-being. They require emergency care more often and are more likely to suffer frequent or long-term illness, which is recognized as a cause of chronic absenteeism. They are more likely to have health problems as adults. Tennessee offers either TennCare or CoverKids to children and pregnant women in households with gross income of up to 250 percent of the federal poverty level based on household size. Most children in Tennessee have access to some kind of health insurance, though a small number may not.

The parents of many eligible children do not qualify for public insurance themselves and so are less likely to apply or even to know that they should apply for their children. The percent of Tennessee children who lack health insurance has declined over the last several years as people without health insurance were encouraged to apply for it on the exchange and public insurance or subsidies were offered to many low-income families. Nonetheless, most of the children lacking health insurance qualify for TennCare or CoverKids. The US Census Bureau produces Small Area Health Insurance Estimates by county for various groups. Children and youth under 19 in households below 250 percent of the federal poverty level who lack insurance are among the estimates available.

Across the United States, Native American children and Hispanic children are the least likely to be covered. Tennessee has a very small Native American population, too small to even include as a separate group, but Tennessee is like other states in that our Hispanic children are over twice as likely to be uninsured than other children.
Percent of Babies Born at Low Birthweight

Low birthweight is defined as less than 2,500 grams (about 5 and a half pounds) at birth. The main reason babies are born at a low birthweight is premature delivery, though other less common pregnancy complications can also be the cause. Babies born at a low birthweight are at risk for several complications, including brain bleeds, breathing problems, apnea (one of the causes of SIDS), slow growth and delayed development. There is also an increased risk of particular heart development, digestive and eye problems. The long term risks include higher rates of neurological disorders such as autism and ADHD; increased risk of obesity, metabolic syndrome and diabetes; and higher rates of high blood pressure and heart disease. In addition to these direct risks, having a high rate of babies born at a low birthweight is indicative of a system that is not working correctly to produce the best outcomes for pregnant mothers and infants.

Some of the risk factors contributing to preterm birth and to low birthweight babies include maternal smoking during pregnancy or maternal exposure to secondhand smoke, maternal use of street drugs or abuse of prescription drugs, chronic health conditions, and pregnancy complications such as inadequate pregnancy weight gain, placenta problems and infection during pregnancy. Some groups are more likely to go into preterm labor, including mothers under the age of 17 or over the age of 35, African American mothers, and mothers carrying multiples.

Rates of maternal smoking during pregnancy in Tennessee are twice the national average. Tennessee is not alone in this; the problem is regional, but, as seen in the map to the right, the regional breakdown is not the typical one of southern states exhibiting higher rates of unhealthy behaviors than northern states. West Virginia had the highest rate of pregnant moms smoking in 2015 at one in four. Tennessee’s rate was 14 percent, while the rate nationally was eight percent.

Tennessee also has a problem with maternal use of street drugs and/or abuse of prescription drugs, especially opioids. This has been a growing problem nationally and is especially concentrated in rural areas. In Tennessee, rates of Neonatal Abstinence Syndrome (NAS – babies born addicted to certain drugs who must be weaned off them) are highest in the eastern, Appalachian areas of the state, but the problem is moving west at a rapid pace.

Statewide, the rate of babies born with NAS is growing as the number of pregnant moms using opioids and other drugs that can cause a baby to be born addicted continues to grow.
Child and teen deaths are due primarily to accidents and violence, though cancer is also a significant cause. The Centers for Disease Control (CDC) lists the top three causes of death for different age groups of children and teens. The rate in this indicator does not include deaths in the first year of life, though the information is included in this CDC list.

Good public policy can help reduce the number of child and teen deaths, especially those due to accidents. Tennessee has focused on increasing awareness of safe sleeping practices for infants; requiring safety precautions for children like helmets, car seats, and lifejackets; and recognizing and counseling troubled teens to promote good mental health and avoidance of risky behaviors. In addition, some Tennessee community groups are working to increase awareness of and to advocate for safe gun storage.

Child and teen death rates vary across the state. Several counties had no child and teen deaths in 2015 and share the rank of “1” on this measure. The highest rate was 154.7 in Morgan County (rate is per 100,000). Pickett County had a rate of 97.5, and Sequatchie, Van Buren and Lake Counties all had rates in the 80’s.

The National Strategy for Suicide Prevention launched in 2001 as the first coordinated national effort to reduce the number of suicides. In Tennessee, groups such as the Tennessee Suicide Prevention Network and the Suicide Prevention Resource Network work with advocates, teachers, counselors and departments like the Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS) to address the risk factors for suicide. TDMHSAS also offers a Mobile Crisis Center that provides a 24/7/365 response team for those suffering a mental health crisis.
Family and community provide the safe, stable, nurturing relationships children need to thrive. Family dysfunction, like abuse, neglect, domestic violence, addiction and mental illness, take a toll by causing levels of stress that are toxic to healthy child development. Strong communities, whether they are relatives, neighbors or school staff and teachers, can provide children with the stable adult relationships they need. Toxic stress can hinder brain development and lead to challenging behavior at school and questionable decision-making like teen substance abuse and early sexual activity. Taking a two-generation approach to childhood trauma can help prevent and mitigate Adverse Childhood Experiences (ACEs) while helping parents learn to deal with their own stress more effectively, making them less likely to take that stress out on their children. Evidence-based home visiting programs have shown to be effective two-generation strategies in early childhood. Helping parents while we help children strengthens families and improves outcomes for children.
The data on child abuse and neglect is useful but inconsistent and incomplete. It is difficult to compare Tennessee to other states because every state reports its data differently. Even a state’s own data over time can tell a complex story. When states launch awareness campaigns to combat abuse and neglect, the first thing they often see is an increase because more people recognize it and recognize their responsibility to report it. Nonetheless, over time it has been clear nationally and at the state level that physical and sexual abuse have decreased. At the same time, emotional abuse and neglect have not decreased as much because they are harder to see from the outside and harder to recognize within your own family. In addition, the amount of emotional abuse and neglect that goes unreported is difficult to quantify.

To reach a level of neglect that is clearly defined in law a parent must fail to meet their child’s needs in such a widespread way that the child is in serious danger. Neglect is much more than that, however, and understanding it is key to preventing what can be devastating effects to healthy child development. The Harvard Center on the Developing Child has conducted substantial research into different types of unresponsive care.5

Chronic under-stimulation and even severe neglect can be reduced with two-generation strategies designed to serve the child and the parent. Quality home visiting programs can teach healthy parenting skills in a compassionate environment. Home visiting and therapeutic training for foster parents can also improve outcomes for children who have been removed from their homes due to a history of neglect and/or abuse.

Tennessee has recently begun another innovative program called Infant Court, a specialized court that brings focused attention to the specific needs of infants and toddlers. The goal is to mitigate the impact of adverse early childhood experiences through a twofold approach: 1) achieving a safe and nurturing permanent home for these infants as soon as possible; and 2) providing training and support to parents, caregivers, and professionals involved with infants to promote healthy brain development and positive mental health.6 Tennessee’s first Infant Courts are in Davidson and Grundy Counties. Legislation passed by the General Assembly in 2017 promotes expansion of the program to five additional courts by 2018 and another five by 2019. Infant Courts are relatively new but have been used in other states and show promise. Compared to traditional court, infants and toddlers in Infant Court: 1) end up in a permanent family two to three times faster, 2) leave foster care a year earlier, and 3) end up with their own family nearly twice as often.

6 http://aimhitn.org/programs/infant-court
The high social and economic costs of teen pregnancy and child-bearing can have short- and long-term negative consequences for teen parents, their children, and their community. Research shows that pregnancy and childbirth have a significant impact on educational outcomes of teen parents. By age 22, only around 50 percent of teen mothers have received a high school diploma, and only 30 percent have earned a General Education Development (GED) certificate, whereas 90 percent of women who did not give birth during adolescence receive a high school diploma. Only about 10 percent of teen mothers complete a two- or four-year college program. Teen fathers have a 25 to 30 percent lower probability of graduating from high school than teenage boys who are not fathers.

Children who are born to teen mothers also experience a wide range of problems. For example, they are more likely to:

- have a higher risk for low birthweight and infant mortality;
- have lower levels of emotional support and cognitive stimulation;
- have fewer skills and be less prepared to learn when they enter kindergarten;
- have behavioral problems and chronic medical conditions;
- rely more heavily on publicly funded health care;
- have higher rates of foster care placement;
- be incarcerated at some time during adolescence;
- have lower school achievement and drop out of high school;
- give birth as a teen; and
- be unemployed or underemployed as a young adult.

These immediate and long-lasting effects continue for teen parents and their children even after adjusting for the factors that increased the teen’s risk for pregnancy—e.g., growing up in poverty, having parents with low levels of education, growing up in a single-parent family, and having low attachment to and performance in school.

The good news about teen pregnancy is that it has been dropping steadily for decades, both nationally and in Tennessee. The bad news is that racial and ethnic disparities in the prevalence of teen pregnancy persist. Good public policy to help prevent teen pregnancy includes reproductive health education and available, affordable birth control. Long Acting Reversible Contraceptive (LARC) availability can also help because they are effective for long periods of time. They include injections, subdermal implants and intrauterine devices (IUDs).

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Discipline that removes children from the classroom is known as “exclusionary” and is one of the primary tools teachers use to manage their classrooms. Unfortunately, exclusionary discipline can take a toll on children. Challenging behavior in the classroom is more common among children who are already dealing with higher risks for poor performance in schools. Removing them from classroom instruction and from their peers only exacerbates the problem. There is no evidence that exclusionary discipline is an effective intervention for children with challenging classroom behavior. The Tennessee Department of Education is currently studying pre-k and kindergarten suspension to produce recommendations for reducing the number that occur each year.

Compounding the problems already associated with exclusionary discipline is the fact that there are strong disparities in its use. Boys are much more likely to be suspended than girls; black and Hispanic students are more likely to be suspended than white students; special education students are suspended at a higher rate, often for behaviors that are known to accompany their disabilities. Suspension data broken down into these smaller groups is not yet available for the 2014-15 school year, but 2013-14 data reveals that 27 percent of children in all three of these risk groups (black, male, special education students) were suspended during the school year. Further, research has shown that a child’s size affects his suspension risk, and size increases with age. Suspension rates increase through ninth grade and then level off. The portion of black male special education students suspended in a year grows to one third in the sixth grade and peaks at 41 percent in grade 9.
Appendix: Using the KIDS COUNT Data Center

The Tennessee Commission on Children and Youth serves as the Annie E. Casey Foundation’s data grantee in Tennessee. Part of that responsibility is to upload county-level data to the KIDS COUNT data center website at [www.datacenter.kidscount.org](http://www.datacenter.kidscount.org). The KIDS COUNT data center is an excellent resource for indicators of child and family well-being with over 200 statewide indicators and 77 county-level indicators, in addition to a few available for school districts, cities, Congressional districts and zip codes.

The data center offers users the ability to download raw data, state or county profiles, tables, graphs and maps. It is user-friendly, but some of the basics on using it are included here.

Navigating from the home page

The bar across the top of the home page offers several ways to access the data:

Clicking “Location” takes you to a map of the US, where you can choose US data or click a state for that state’s data. Clicking “Topic” takes you to a list of different areas of information you might be seeking. Clicking “Characteristic” lets you choose data by race/ethnicity, age or family nativity. You can also type whatever you are looking for into the search box and get a list of results based on your search terms. Once you reach a page with a list of indicators, the search box remains at the top while the rest of the choices (location, topic, characteristic) continue to be offered down the left side of the screen.
Running a County Profile

On the homepage, scroll below the map of the US, the icons for topics and the icons for characteristics to the section on the right called “Quick Links” and choose “Create Custom Profiles.” This will bring up a box of choices.

For a county profile, go the pull-down menu at the bottom of the box and choose your state of interest. Click Next and then choose “county” and check your county of interest. Click Next.

Choose specific indicators from the lists available or click “View all indicators for Tennessee” for a full profile. Then click “Create Report.”
Making a table, graph or map

Choose the type of data you want to see. Here we have chosen “county,” which generates a list of all data available by county. When the list comes up, choose an indicator. Here we have chosen “Children in poverty.”

The data will come up in a table with all counties and the most recent five years of data available. In a table, you can pick up to five years. If you click “Trend” at the top, you can choose up to 10 years. It will allow you to choose up to seven counties. Click “Uncheck All” under counties and then just choose the ones you want to see. Click “Compare to Tennessee” to add statewide data to the table or graph. Also, under “Data Type,” only one type can be graphically represented at once. The site usually defers to “Number,” though “Percent” usually makes the nicer graph.
Choose “Bar” to see a bar chart of up to five locations for one year. You can even print, e-mail or share the results.

One of the greatest features is the ability to run a map comparing the counties in the state or the states in the United States. Choose “Map” and one year of data. Choose number or percent under “Data Type.” The resulting map can be saved or embedded in a web site. Just click “Embed” or “Save” and then follow the directions. If you get lost or confused, there is always a “Help” button at the top of the page.