



Siskin Hospital for Physical Rehabilitation
Community Health Needs Assessment FY2021

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EXECUTIVE SUMMARY

Siskin Hospital Background

For more than 30 years, Siskin Hospital for Physical Rehabilitation has served thousands of patients each year through inpatient, outpatient and subacute physical rehabilitation programs, offering a variety of therapies to meet the individual needs of each patient.

Since opening in 1990, it has been our mission to provide a wide range of high-quality physical rehabilitation services to achieve positive outcomes that benefit the individuals served as well as the community at large. Our philosophy of *Caring People. Changing Lives.*[®] nurtures and advances a culture of caring, commitment and pride, with the goal of exceeding the expectations of those we serve and those who serve.

Siskin Hospital's rehabilitation programs offer a multi-disciplinary approach for the treatment of adults with acute and chronic conditions including amputation, brain injury, neuromuscular disorders, musculoskeletal and orthopedic conditions, spinal cord, stroke, and major multiple trauma. Patients are referred by their physician to Siskin Hospital for physical rehabilitation services following their acute-care hospital stay to improve overall functional independence.

Community Benefit Goals

Frequently, individuals with disabilities are at higher risk for secondary healthcare conditions. At Siskin Hospital, our priorities are placed on serving individuals in these target populations and high-risk communities. Siskin Hospital's Community Health Needs Plan Objectives include the following:

1. In accordance with our Mission, Vision, Core Values and Hospital Policies and Procedures, Siskin Hospital provides physical rehabilitation charity care to those that have experienced disabling accidents, illnesses or injuries in the communities we serve.
2. To continually provide the best in physical medicine and rehabilitation care, associates at Siskin Hospital strive to improve its education, training and expertise. From physical, occupational and speech therapists, to nurses and psychologists, our associates are trained and certified in the latest technology, equipment and clinical practices.
3. The healthcare field is constantly changing, and Siskin Hospital strives to remain at the forefront of physical medicine and rehabilitation. We promote recovery and/or treatments for those with disabilities by conducting statistical and behavioral research.
4. As part of Siskin Hospital's continuum of care, we continually seek to improve the opportunities for those with disabilities to access care and benefit from interaction and socialization with peers, in addition to providing support for caregivers. We work closely with local agencies to ensure

transportation is available for those without access. Until the COVID-19 pandemic, a variety of support groups were held at Siskin Hospital each month that offered continued information, education, and support for the disabled and their family members. Where possible, these continued to meet virtually with plans to resume in-person meetings when it is safe to do so.

5. Siskin Hospital works diligently to reduce environmental barriers for those with disabilities at home, work or within the community by supporting and advancing the use of assistive devices and technology. We collaborate with community agencies to provide wheelchairs, walkers and/or other assistive devices for patients without insurance to cover the costs of such equipment.
6. Siskin Hospital offers a variety of additional classes and support to improve the health of the community including, but not limited to, balance and dizziness, communication, driving evaluation, free health screenings, low vision, lymphedema, memory, pain, pelvic floor, spasticity, swallowing, TMJ and headache, etc. Our Telehealth Rehabilitation Services meet the needs of patients who are unable to meet for in-person therapy. Family and caregiver education is an integral part of the rehabilitation program at Siskin Hospital and typically involves both individualized instruction as well as educational materials specific to the individual's care needs.
7. Through its involvement in Project SEARCH, Siskin Hospital's Vocational Services Department works with local businesses, organizations, and agencies to increase equality and diversity in employing individuals with disabilities. Project SEARCH staff provide onsite training and education to employers who have hired Project SEARCH interns with disabilities.
8. In an effort to decrease secondary health conditions related to disability, and to promote strength, increase flexibility and enhance functional independence, we created the Siskin Health & Fitness Center at Siskin Hospital. The mission of this medical model fitness center promotes health and independence by providing fitness activities for all levels of ability in a safe atmosphere that minimizes self-consciousness. It was designed so that the able-bodied and the disabled can work out side by side, and features adaptable equipment, expert staff to assist with personalized fitness programs and access to therapy associates at Siskin Hospital. Specialized programs, such as Next Step, Cancer Fit and Healthy Heart target the needs and challenges of at-risk populations in our community as well as provide guidance to former outpatients to fully regain function.

Service Area Overview

Siskin Hospital, the only freestanding, not-for-profit rehabilitation hospital in Tennessee, is located in Hamilton County, in the southeast corner of the state. It is currently a 196-bed inpatient rehabilitation facility, with 88 inpatient beds and 108 subacute beds. Patients are admitted to Siskin Hospital primarily from the Southeast and tri-state region, but others come from all over the United States.

In addition to the Hospital's inpatient campus located in downtown Chattanooga, Siskin Hospital offers outpatient physical rehabilitation services at four locations: Chattanooga, Cleveland, East Brainerd and Hixson.

Experienced and dedicated associates at Siskin Hospital treat patients through our comprehensive inpatient, outpatient, subacute and vocational rehabilitation programs, as well as an accessible Fitness Center. In Calendar Year 2020, Siskin Hospital provided treatment for 2,042 inpatients and 685 subacute patients at its main facility downtown. There were 28,598 outpatient visits at various Siskin Hospital Therapy Services sites throughout our community during Fiscal Year 2020. This figure is down from the previous year (37,373) because of the COVID-19 pandemic.

The Hospital's Vocational Services Department has been temporarily closed since March 2020 due to the pandemic. Nevertheless, one of our programs, Project SEARCH (an international transition-to-work program for high school students with intellectual and developmental disabilities) has remained active. Siskin Hospital's Vocational Services Department associates have continued to work in collaboration with Hamilton County Schools, Tennessee Division of Rehabilitation Services, and the YMCA to provide vocational training for Project SEARCH clients and to secure competitive employment through our Supported Employment Program. Since the pandemic commenced, Vocational Services associates have provided services to 19 individuals and have already placed 11 of those individuals within the past year, five in full-time jobs and six in part-time jobs.

Patients at Siskin Hospital may receive inpatient or outpatient care from a treatment team consisting of:

- Board Certified Psychiatrists
- Physician Assistants/Nurse Practitioners
- Case Managers
- Rehabilitation Nurses
- Pharmacists
- Physical Therapists
- Occupational Therapists
- Speech-Language Pathologists
- Respiratory Therapists
- Psychologists/Neuropsychologists
- Clinical Nutritionists
- Wound Care Specialists

Siskin Hospital's comprehensive physical rehabilitation programs and services are designed to help patients reach and surpass their goals. In keeping with Siskin Hospital's mission, vision and core values, our broader objective is to serve the community by supporting common health goals determined on local, state and national levels. Projected changes to our local demographic significantly influences this objective.

The 2012-2016 American Community Survey (ACS; U.S. Census Bureau) estimated Hamilton County's population at 351,305 in 2020, an increase of 4.4 percent since the 2010

Census. The senior population (age 65+) is estimated at 16 percent (compared to 15 percent at the state and national level). Within the decade, seniors in Hamilton County, home to Siskin Hospital, is projected to be a full 22 percent of all county residents by 2030. (1)

According to the CDC, typical health concerns for this population include

- Cognitive impairment
- Hearing difficulty
- Walking difficulty
- Diabetes
- High blood pressure
- Depression¹

Of Hamilton County's senior population (88,121), 10.9 percent have Medicaid and 15.9 percent are Medicare enrollees. (2) In 2016, 45 percent lived alone; 20 percent were veterans; 9 percent lived below 100 percent of the poverty level and 20 percent were below 150 percent of the poverty level. (3)

¹ "Promoting Health for Older Adults." Centers for Disease Control and Prevention.
<https://www.cdc.gov/chronicdisease/resources/publications/factsheets/promoting-health-for-older-adults.htm>

Health Ranking Tools

America's Health Rankings measures the health of each state in the U.S.; *County Health Rankings and Roadmaps* measures and ranks each county against others in its respective state. Because of the wide variation in rankings among individual counties in the Siskin Hospital service area, and because Hamilton County, Tennessee, the home of Siskin Hospital, accounts for half of our FY20 admissions, reports on Health Outcomes and Health Factors for Hamilton County are primarily examined in this assessment.

- In each ranking, a lower number indicates better performance of an individual county as compared with others in the state.
- Hamilton County received a rank of 18 of 95 counties for Health Outcomes, which includes mortality and morbidity indicators.
- Hamilton County is ranked 8 out of 95 counties for Health Factors. These include health behaviors, clinical care, social and economic factors, and physical environment.
- Surrounding counties as well as adjacent counties in Georgia and Alabama rank much higher. (4a)
- Tennessee ranks 44 of 50 in Health Outcomes. (4)

Identified Needs

Siskin Hospital recognizes the concept of health-related quality of life (HRQOL) and its role as an important component of health surveillance. Largely self-reported, factors of mental and physical health perceptions are given equal weight with more objective data regarding socioeconomic status, housing, and health care access. The questions and subsequent answers in HRQOL surveys are generally considered valid indicators of service needs and intervention outcomes, and are a powerful predictor of mortality and morbidity.

Accordingly, one 2020 HRQOL survey revealed that fewer than half of Tennessean (47.4%), Georgian (48%), and Alabaman (44.9%) respondents reported their health to be very good or excellent. This finding corresponds to qualitative data ranking these three states as among the least healthy of any in the U.S. (4)

Researchers at Siskin Hospital developed a primary research project to assess the specific needs of those individuals with disabilities who live in the service area. This effort was designed to obtain feedback and input from constituencies who look to Siskin Hospital for health services (e.g., current and former patients and caregivers). The information obtained will be used to develop specific actions designed to improve the health and access to essential services for this vulnerable population.

Additionally we have reviewed the existing and available literature, both regional and national, in tandem with our own service area survey.

We plan to use data collected to devise an implementation process via our strategic planning process for our ongoing hospital operations.

A. STRATEGIC APPROACH TO ADDRESSING THE NEEDS OF OUR COMMUNITY

Background

Siskin Hospital for Physical Rehabilitation is Tennessee's largest not-for-profit rehabilitation hospital and is nationally known for providing exceptional rehabilitation care through a full continuum of patient care services. Opening in 1990 with 50 inpatient rehabilitation beds, it has since expanded to its present 196 inpatient beds. It is the only freestanding, not-for-profit rehabilitation hospital in Tennessee, operating outpatient clinics in Chattanooga, East Brainerd, Cleveland and Hixson. It has also been recognized by Newsweek as among the nation's best rehabilitation centers and U.S. News & World Report as among the nation's best short-term rehabilitation facilities. Its Subacute Program is the only Chattanooga-area skilled facility to receive the CMS 5-star rating. Siskin Hospital is accredited by the Center for Improvement in Healthcare Quality (CIHQ) and The Commission on Accreditation of Rehabilitation Facilities (CARF).

Siskin Hospital is dedicated to the care and treatment of persons with brain injury, stroke, spinal cord injury, amputation, neurological disorders, orthopedic conditions and general rehabilitation needs. It also provides treatment for neurological disorders and loss of muscle strength following illness or surgery. Siskin Hospital is a renowned regional and national health care leader, offering expertly-trained associates, high quality and cost-effective care, a high level of patient satisfaction, and innovative services.

Siskin Hospital patients benefit from the experience and expertise of a team of rehabilitation professionals who share one goal: to help each individual recover the skills, strengths and function to optimize his or her recovery. Siskin Hospital offers the comprehensive care, advanced treatment and leading-edge technologies to best address each patient's complex medical physical, emotional and vocational challenges. Siskin Hospital also provides the necessary training and education to support the transition of patients and their families to life ahead. In addition, the Hospital helps prepare the next generation of clinicians by providing on-site training to students in physical therapy, occupational therapy, speech language pathology, and nursing programs. The Neurologic Physical Therapy Residency Program prepares physical therapists to provide our neurologic patients with the highest standard of care, using the most current evidence-based practices. Our Nurse Residency Program is a transition to practice program for recent RN or LPN graduates.

As a specialized rehabilitation hospital, Siskin Hospital administration seeks to ensure the current service mix and future service development fulfill identified gaps in care and treatment in order to optimally meet the health needs of community residents.

This Community Health Needs Assessment (CHNA) synthesizes a wide range of community health information, including other needs assessments. The goal is to ensure that Siskin Hospital's strategies support a healthier community and complement existing services available to community residents.

Methodology

Primary research for the Siskin Hospital Community Health Needs Assessment (CHNA) was conducted in May 18-31, 2021 under the supervision of the Marketing and Communications Department in conjunction with the Administration of Siskin Hospital. The purpose of the assessment was to gain better insight into the health concerns and needs of communities served, focusing specifically on those of persons with disabilities and impairments.

Included in this assessment were individuals who received health care services within the Siskin Hospital network in the past two years and had email addresses available for assessment dissemination. Some caregivers also received the survey. A total of 2,284 individuals were included; survey respondents totaled 63 individuals. Although the qualitative data outlined in this report comes from our primary service area of Hamilton County, the quantitative data obtained from the survey possibly reached beyond our primary service area, as we did not exclude patients outside of Hamilton County.

The assessment was distributed to via email through the secure online survey company, Survey Monkey. Each message introduced and described the purpose of the assessment. Recipients were provided an opportunity to opt out of the invitation through an email reply to the Survey Monkey link. The assessment data collection occurred over a two-week period.

Health Status Information

The FY2021 Siskin Hospital CHNA synthesizes information from a variety of sources, including secondary health-assessment research conducted by government agencies. This assessment was developed with input from people representing the broad interests of the community and people with special knowledge or expertise in public health.

A. Quantitative Data

- Demographic data provides an overview of the residents of Siskin Hospital's primary service area, Hamilton County.
- Secondary source data identifies health indicators for the service area and compares with state and national results when possible.
- Community Need Index (CNI) from Dignity Health ranks community need by ZIP code on a range of socioeconomic factors that affect health and healthy behaviors.
- *2021 County Health Rankings and Roadmaps* provides rankings of each county in the service area through collaboration between the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation.

B. Qualitative Data

- Siskin Hospital constituencies, including medical providers, community individuals, former patients, caregivers, and others were surveyed to determine community needs.

- Surveys were directed specifically to areas of disability and impairment; access to health care services; transportation; employment; and the need for adaptive sports and recreation programs.

C. Other

- An evaluation of organizational effectiveness in responding to identified community health needs.
- An ongoing coordination of strategies with community partners and key stakeholders.
- Necessary revision of plan strategies and anticipated outcomes based on identified changes in community needs.
- Future application of this report to the next organizational strategic plan.

The results of this CHNA will be used to improve quality and patient safety, expand care coordination, and extend preventive services. These results will also be helpful to Siskin Hospital leadership in identifying specific competencies of the organization and its associates that can be enhanced to meet the needs of the communities served.

B. QUANTITATIVE INFORMATION

Siskin Hospital serves patients from the primary, secondary, tertiary and quaternary markets, as listed below. However, as a specialty hospital, patients come from a wide geographic area in Tennessee, Alabama, and Georgia. In addition, a large number of patients from the Southeast (Virginia, Georgia, Kentucky, Arkansas, Alabama, North Carolina, Florida and Missouri) and from across the U.S. come to Siskin Hospital for specialized treatment or state-of-the-art equipment.

Figure 2.1
Siskin Hospital's Regional Service Area

Service Area - IRF & SNF Services			
Primary Service Area		(PSA)	
TN	GA		
Hamilton	Walker		
Bradley			
Secondary Service Area		(SSA)	
TN	GA		
Marion	Whitfield		
Sequatchie	Catoosa		
	Dade		
Tertiary Service Area		(TSA)	
TN	GA	AL	NC
Rhea	Murray	Dekalb	Cherokee
Meigs	Gordon		
Polk	Chattooga		
Mcminn			
Grundy			
Bledsoe			
Quaternary Service Area		(QSA)	
TN	GA	NC	
Franklin	Fannin	Graham	
Coffee	Gilmer		
Lincoln	Floyd		
Knox	Bartow		
Monroe	Union		
Cumberland			
Putnam			
Roane			
Van Buren			
Warren			

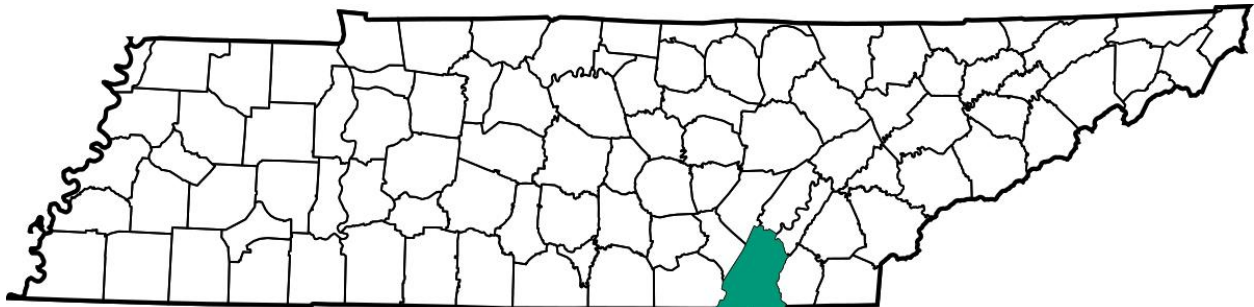
Healthcare services are provided through inpatient rehabilitation at the Hospital's downtown Chattanooga location, as well as four outpatient centers in Tennessee: Cleveland, East Brainerd, Hixson and Chattanooga. As 86 percent of patients come from Hamilton County, we chose to focus the primary data collection locally.

In 2019, Hamilton County's population was 367,804 (2) and is projected to grow to 414,987 by 2040. (5)

Of those, 59.4 percent comprise the working age (20 to 64) population, while 17.3 percent of the population are 65 years and older. (3) With the "silver tsunami" well underway and realized rates of growth in the 65-plus population already apparent, the prevalence of disability from all causes is likely to increase.

Hamilton County's pediatric population is 23.3 percent.

Figure 2.2
Hamilton County: Siskin Hospital's Primary Service Area



Demographics

Of the counties in Siskin Hospital’s service area, Hamilton County, Tennessee is by far the most densely populated. Hamilton County is the fourth most-populous county in the state and is a growing and thriving area. In 2010, Hamilton County’s population was 336,463. By 2021, Hamilton County population will be 358,955, at a 0.59 percent annual rate of increase. (5) This increase can be attributed to a strong economic environment, business growth and employment opportunities. The COVID-19 pandemic may also have an effect in 2020 as more people from urban areas across the nation move to less populated states such as Tennessee.

Table 2.1

POPULATION OVERVIEW Hamilton County, 2010-2018	
	Hamilton County, TN
Population (2010)	336,463
Population Estimate (2018)	364,286
Estimated Change 2010-2018	9.2%
<i>Source: U.S. Census Bureau; Tennessee State Data Center</i>	

Socioeconomic Status

Hamilton County has a wide range of economic status and security. According to available data, between 12.7 percent of residents were living below the federal poverty level (FPL) in 2019. In the same year, service area unemployment was 3.2 percent, as compared to the national rate of 3.5 percent and the state of Tennessee rate of 3.4 percent in 2019. (6)

Table 2.2

Socioeconomic Factors Hamilton County and Tri-State Region, 2019			
County/State	Median Household Income	Persons below FPL	Unemployment*
Hamilton (TN)	\$57,802	12.7%	3.2%
Tennessee	\$56,047	13.8%	3.4%
Georgia	\$61,950	13.5%	3.4%
Alabama	\$51,771	15.6%	3.0%
<i>*2019 Annual Average Unemployment Rate Source: U.S. Census Bureau; Bureau of Labor Statistics</i>			

Educational Attainment

Educational levels vary in Hamilton County.

- Almost 7 percent of Hamilton County residents have not graduated from high school.
- More than 35 percent of Hamilton County residents have college degrees, which is higher than both the state and national averages.
- In Tennessee, 28.3 percent of Caucasians have a college degree, compared with 20.4 percent of African-Americans and 16.1 percent of Hispanics. (7)

Table 2.3

Educational Attainment, Adults 25+ Hamilton County, Tennessee and U.S. 2019 Estimates			
	Hamilton County	Tennessee	U.S.
	%	%	%
Less than high school	3.8%	N/A	4.3%
Some high school	6.9%	7.7%	6.6%
High school diploma	24.1%	31.5%	26.9%
Some college/assoc. degree	30.1%	27.7%	28.6%
Bachelor's degree or higher	35.1%	28.8%	33.1%
Total Population 25+	100%	100%	100 %

Source: USDA Economic Research Service; 2019 American Community Survey 1-Year Estimates

Educational level is interrelated with health literacy. The U.S. Department of Health and Human Services has defined health literacy as occurring “when a society provides accurate health information and services that people can easily find, understand, and use to inform their decisions and actions.” (8) Low health literacy is associated with:

- Poor management of chronic diseases,
- Poor ability to interpret labels and health messages,
- Poor ability to understand and adhere to medication regimes,
- More emergency visits and hospitalizations,
- Poor health outcomes,
- Higher mortality risk, especially for seniors. (9)

Race/Ethnicity

Hamilton County is more racially or ethnically diverse than the state of Tennessee, but not as compared to the nation.

- White/Caucasians represent the area’s largest population group at nearly 71 percent.
- The Black/African American population is more than three times as large as the Hispanic population.
- The ratio of Hispanics is higher in Hamilton County than of that in Tennessee, but a third of that of the nation.

Table 2.4

Race/Ethnicity Hamilton County, Tennessee and U.S.			
	Hamilton County	Tennessee	U.S.
Race/Ethnicity	%	%	%
White	70.9%	78.4%	72%
Black	19.9%	17.1%	12.8%
Hispanic	6.0%	5.7%	18.4%
Asian & Pacific Is.	3.3%	2.1%	5.9%
American Indian	1.0%	.5%	.9%

Source: 2019 ACS 1-Year Estimates

Population Age and Projections

Hamilton County has an older population that is almost two full percentage points higher than that of Tennessee, and nearly three full percentage points higher than the U.S. estimate.

- Its under-18 population is also almost two full percentage points less than the U.S. average and one percentage point less than the state average.
- Seniors age 65 or older are estimated at 17.9 percent of Hamilton County’s population. One in five Tennesseans will be 65 or older by 2040. (11)
- The number of women of childbearing age in Hamilton County corresponds to both the national and state of Tennessee rates.

Table 2.5

Population Age Hamilton County, Tennessee, U.S. Population Estimates 2019			
	Hamilton Co.	Tennessee	U.S.
Population under 18	20.9%	22.1%	22.6%
Population 65+	17.9%	16.0%	15.6%
Women of Child-Bearing Age (15-44 yrs)	38.1%	38.2%	38.7%

Source: U.S. Census

Table 2.6

Population Age Projections Hamilton County, Tennessee, U.S. in 2040			
	Hamilton Co.	Tennessee	U.S.
Population under 18	31.7% ^o	15.1%	20.6%
Population 65+	24.4%	20%	21.6%
Women of Child-Bearing Age (15-44 yrs)	unavailable	11.9%	18.3%

^o*Includes age 19*
Source: U.S. Census, Tennessee Data Center

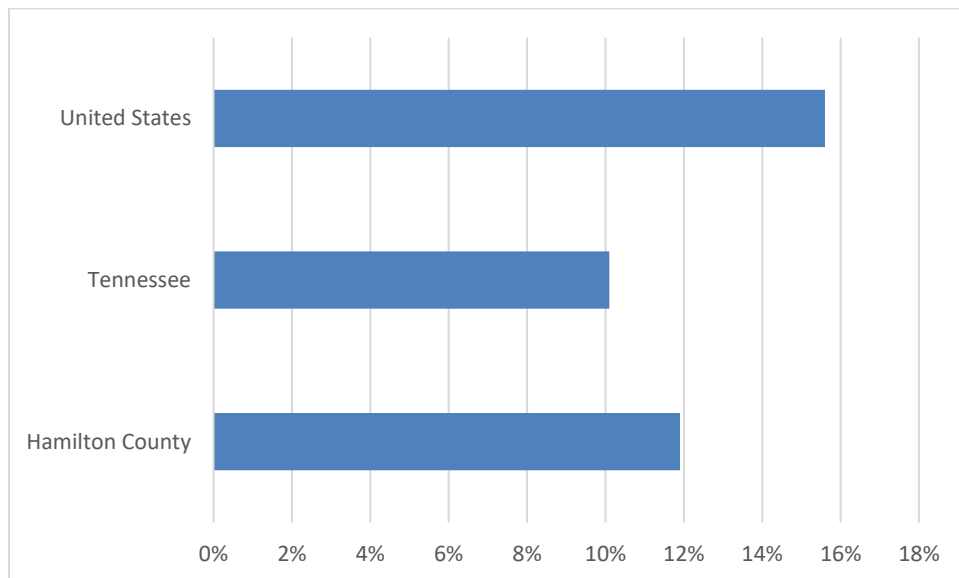
Insurance Trends and Uninsured Status

In 2019, 28.9 million Americans younger than age 65 were uninsured. (12) Under the Patient Protection and Affordable Care Act (ACA), the uninsured rate has dropped since the major ACA coverage provisions went into effect in 2014, but has since increased in 2019. (13) According to the Agency for Healthcare Research and Quality, the uninsured are much less likely to have primary care providers than the insured. They also receive less preventive care, dental care, chronic disease management and behavioral health counseling. Often, those without insurance are diagnosed at more advanced and less treatable disease stages than those with insurance and generally have worse health outcomes, lower quality of life and higher mortality rates. (14)

Hamilton County at 11.9 percent has more uninsured than in Tennessee.

- Tennessee's uninsured rate is 10.1 percent
- Hamilton County's rate is almost four percentage points below the national rate.

Figure 2.3
Uninsured
(% of population without health insurance)
Hamilton County, Tennessee, U.S.: 2019-2020

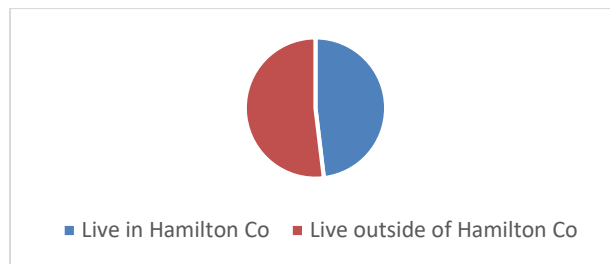


Source: America's Health Rankings 2020, Census Bureau

Hamilton County Hospital Admissions by Patient Residence

Hamilton County serves the region with seven general medical and surgical hospitals. According to data from the Tennessee Department of Health, there were 77,539 Hamilton County hospital utilizations in 2018. Of those, more than half of admissions lived outside Hamilton County, either in other Tennessee Counties (45 percent), in Georgia (47 percent), in Alabama (6 percent), or in all other states (2 percent). (15)

Figure 2.4
2018 Hamilton County Hospital Admissions by Patient Residence



Source: Tennessee Department of Health Joint Annual Report

Community Need Index

In 2005, Dignity Health developed the nation's first standardized Community Need Index (CNI). The CNI identifies the severity of health disparity for every ZIP code in the United States and demonstrates the link between community need, access to care and preventable hospitalizations. The CNI uses a numerical indicator to account for underlying socioeconomic and access barriers that affect a population's health status. Identified barriers include those related to income, culture/language, education, insurance and housing.

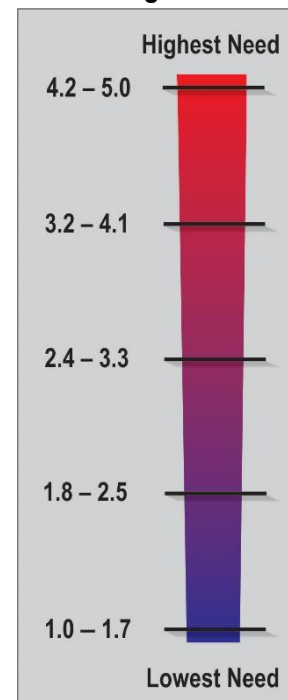
With this tool, ratings are available for individual ZIP codes within a specific county. The "best" score is 1.0, indicating a ZIP code with the lowest socio-economic barriers to health. At the other end, 5.0 represents a ZIP code with the greatest socio-economic barriers to health (see Figure 4.5).

A comparison of CNI scores to hospital utilization shows a strong correlation between high need and high use. In other words, communities with high CNI scores can be expected to have higher hospital usage.

A causal relationship also exists between CNI scores and preventable hospitalizations for manageable conditions. That is, communities with high CNI scores have more hospitalizations that could have been avoided with improved healthy community structures and appropriate outpatient/primary care.

Hamilton County's average score is 3.2. (16)

Fig. 2.5



C. PROVIDER INVENTORY

The map below shows inpatient rehabilitation providers in Chattanooga, Tennessee.

- Siskin Hospital is located in Chattanooga, Hamilton County, Tennessee.
- One other free-standing rehabilitation hospital is located in Chattanooga.
- Of the three acute-care Hamilton County hospitals, only one has an inpatient rehabilitation unit.
- The complete list of inpatient rehabilitation providers in the service area is presented in Table 5.1.

Figure 3.1
Rehabilitation Inpatient Providers
Hamilton County



Table 3.1

Inpatient Rehabilitation Provider Hamilton County, Tennessee	
	Acute Care Hospitals with Rehabilitation Units
	Parkridge Medical Center, Chattanooga
	Rehabilitation Hospitals
	Siskin Hospital for Physical Rehabilitation, Chattanooga
	Encompass Health Rehabilitation Hospital, Chattanooga

D. HEALTH INDICATORS

County Health Rankings

The 2021 *County Health Rankings and Roadmaps* measures the overall health of each county in all 50 states based on the many factors that influence health. In addition, comparisons are made among each of the counties in Tennessee and each is ranked against others in the state. *County Health Rankings* is cited throughout this discussion of health indicators.

The *County Health Rankings* provides overall rankings for two dimensions:

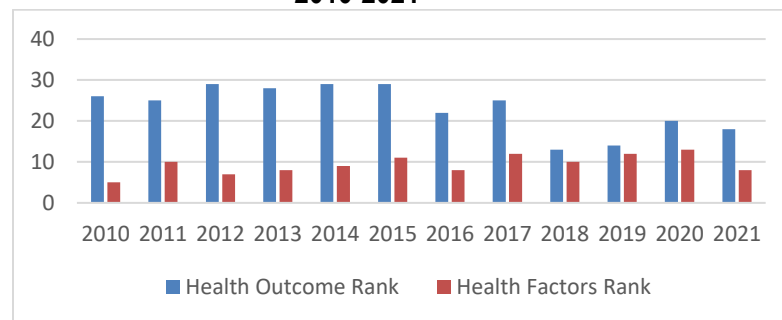
- Health Outcomes, which include mortality and morbidity.
- Health Factors, which are contributing factors to health including clinical care, health behaviors, social and economic factors, and physical environment.

The data for *County Health Rankings* is gathered from around the nation and is comparable between counties, within states. For most measures, county data is also comparable across state lines. However, because state-level effects and differing screening patterns between states affect the rankings, caution must be used in comparing counties across state lines. Therefore, there is no ranking for the region Siskin Hospital serves, as it comprises counties in several states.

Health outcome rankings, based on equal weighting of length and quality of life, range from highest performing counties (a ranking of “1”) to the lowest performing (the numeral varies and is relative to the number of counties in any particular state).

- In 2021, Hamilton County is ranked among the healthiest counties in Tennessee.
- In Health Factors, it ranks 8 of 95, and in Health Outcomes, 18 of 95. (17) Both rankings improved from 2020. (18)

Figure 4.1
Hamilton County Rankings
2010-2021



Source: *County Health Rankings and Roadmaps Tennessee Reports 2010-2021*

Health Outcomes: Morbidity and Mortality

Health Outcomes evaluate mortality and morbidity indicators. Hamilton County ranks below Tennessee but above the U.S. for mortality.

- Hamilton County had fewer premature deaths than Tennessee, but more than the top U.S. performers.²
- In 2021, Hamilton County's health outcomes ranked 18 of 95 among Tennessee counties.

While Hamilton County's outcomes were somewhat better than the state of Tennessee on most morbidity indicators, there is a significant gap between Hamilton County and both Tennessee and the U.S. in birth rates. Outcomes can improve in the following areas:

1. Percentage of low birth weight babies.
2. Percentage of residents stating they have either fair or poor health.
3. Number of poor physical health days.
4. Number of poor mental health days.

Table 4.1
2021 County Health Rankings: Health Outcomes
Hamilton County, Tennessee, and U.S.

Indicator	Hamilton County	Tennessee	U.S. Top Performers
Mortality			
Premature Death (rate/100,000)	8,500	9,400	5,400
Morbidity			
Self-Reported Poor or Fair Health	20%	21%	14%
Self-Reported Poor Physical Health Days	4.7	4.7	3.4
Self-Reported Poor Mental Health Days	5.3	5.2	3.8
Low Birth Weight	10%	9%	6%

Source: County Health Rankings and Roadmaps 2021

Health Factors

Health Factors evaluate the various factors that contribute to poor or good health and eventual Health Outcomes. Table 6.2 shows Health Factors for Hamilton County with comparisons to Tennessee and the U.S., based on weighted scores for health behaviors, clinical care, social and economic factors, and the physical environment. Hamilton County ranks as among the healthiest of Tennessee counties in Health Factors.

² This indicator identifies the years of potential life lost before age 75 per 100,000 population (age-adjusted).

Table 4.2
Health Factors
Hamilton County, Tennessee, U.S.: 2021

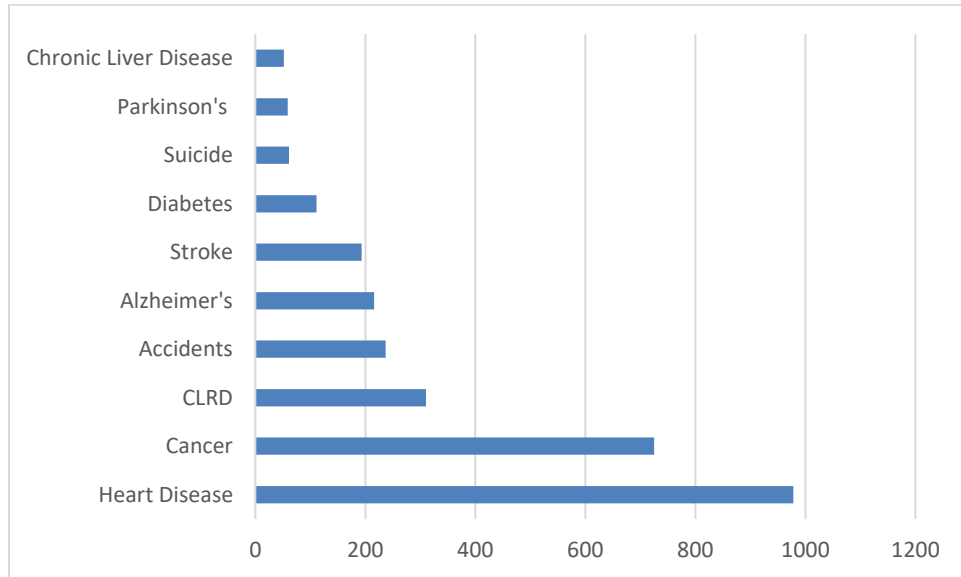
Health Factors	Hamilton County	Tennessee	Top U.S. Performers
Health Behaviors			
Adult smoking	20%	21%	16%
Adult obesity	31%	33%	26%
Food environment index	7.2	6.2	8.7
Physical inactivity	24%	27%	19%
Access to exercise opportunities	89%	70%	91%
Excessive drinking	17%	17%	15%
Alcohol-impaired driving deaths	27%	25%	11%
Sexually transmitted infections	619.7	569.0	161.2
Teen births	24	29	12
Clinical Care			
Uninsured	12%	12%	6%
Primary care physicians	900:1	1,400:1	1,030:1
Dentists	1,300:1	1,800:1	1,210:1
Mental health providers	450:1	630:1	270:1
Preventable hospital stays	2,941	4,915	2,565
Mammography screening	45%	41%	51%
Flu vaccinations	52%	50%	55%
Social & Economic Factors			
High school completion	89%	87%	94%
Some college	68%	61%	73%
Unemployment	3.2%	3.4%	2.6%
Children in poverty	19%	19%	10%
Income inequality	4.8	4.7	3.7
Children in single-parent households	27%	29%	14%
Social associations	13.9	11.3	18.2
Violent crime	663	621	621
Injury deaths	78	92	59
Physical Environment			
Air pollution particulate matter	9.0	8.8	5.2
Drinking water violations	No		
Severe housing problems	13%	14%	9%
Driving alone to work	82%	83%	72%
Long commute – driving alone	24%	35%	16%

Source: 2021 County Health Rankings and Roadmaps: Tennessee Report

Causes of Death

In 2019, 3,840 Hamilton County residents died of all causes. Heart disease and cancer are the two leading causes of death, followed by chronic lower respiratory disease, accidents and Alzheimer's. Stroke mortality is a close sixth cause.

Figure 4.2
Leading Causes of Death (rate/100,000)
Hamilton County, 2019



Source: Tennessee Department of Health

E. SISKIN HOSPITAL CHNA: QUALITATIVE ASSESSMENT RESULTS

The Siskin Hospital CHNA included questions divided into the following five sections:

- Disability and Impairment
- Access to Health Care Services
- Transportation
- Employment
- Adaptive Recreation / Exercise

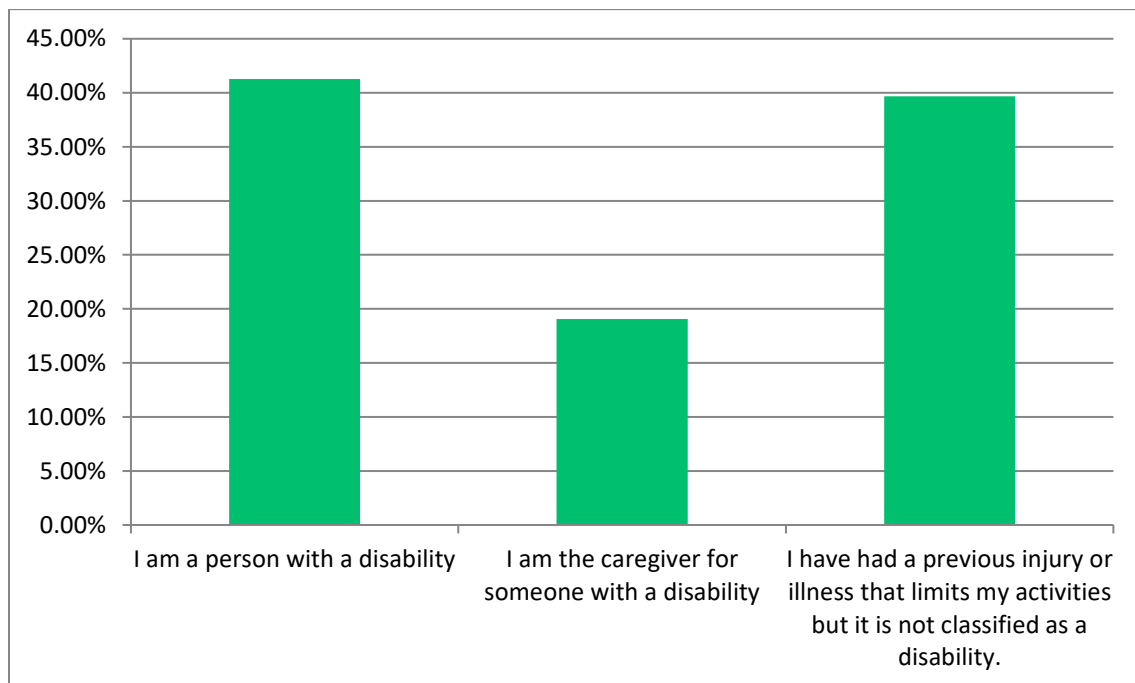
CHNA: Disability and Impairment

Respondent Identity

Of the 63 respondents to the Siskin Hospital assessment, the majority (41.27 percent) were able to complete it independently.

- 19.05 percent of respondents were caregivers.
- 41.27 percent were persons with a disability.
- 39.68 percent of respondents had limited activity ability, not classified as a disability.

Figure 5.1
Respondent Identity

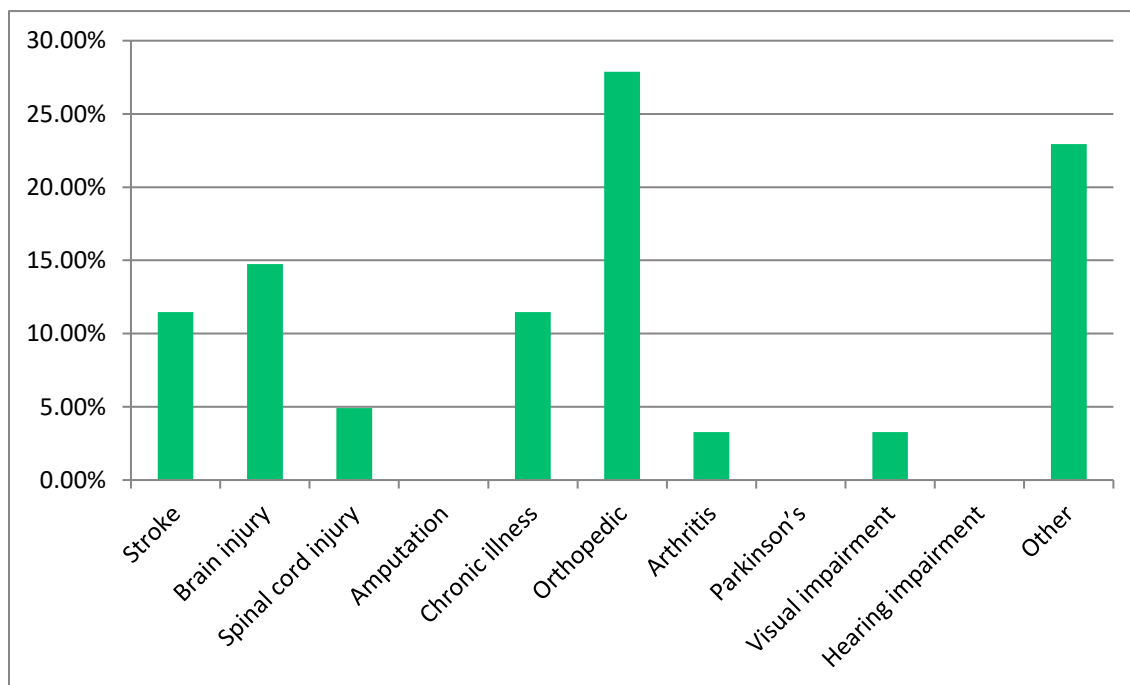


Primary Health Condition, Impairment, Disability, or Limitation

Participants (including caregivers) were asked to describe the primary health condition, impairment, disability, or functional limitation under consideration. Respondents could select more than one condition.

- The majority of respondents (27.87 percent) indicated the primary disability was orthopedic.
- A variety of maladies in the “Other” category was 22.95 percent. It included Developmental disorder/trauma; Bi-polar disorder; IDD; ALS; Multiple Sclerosis; Neuropathy; Cellulitis; Normal Pressure Hydrocephalus; effects of auto accident.
- Brain injury represented 14.75 percent of responses.
- Stroke and Chronic illness responses both came in at 11.48 percent each.

Figure 5.2
Primary Health Condition, Impairment, Disability, or Limitation

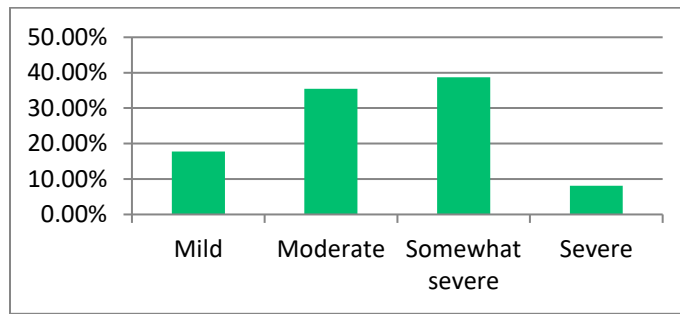


Severity of Disability, Health Condition, Impairment or Limitation

Participants (including caregivers) were asked to describe the respective disabilities by severity using a four-point scale.

- Most respondents (38.71 percent) identified themselves as having a “somewhat” disability.
- “Moderate” was a close second at 35.48 percent, with “mild” (17.74 percent) comprising the third-largest group.
- The smallest grouping was classified as “severe” (8.06 percent).

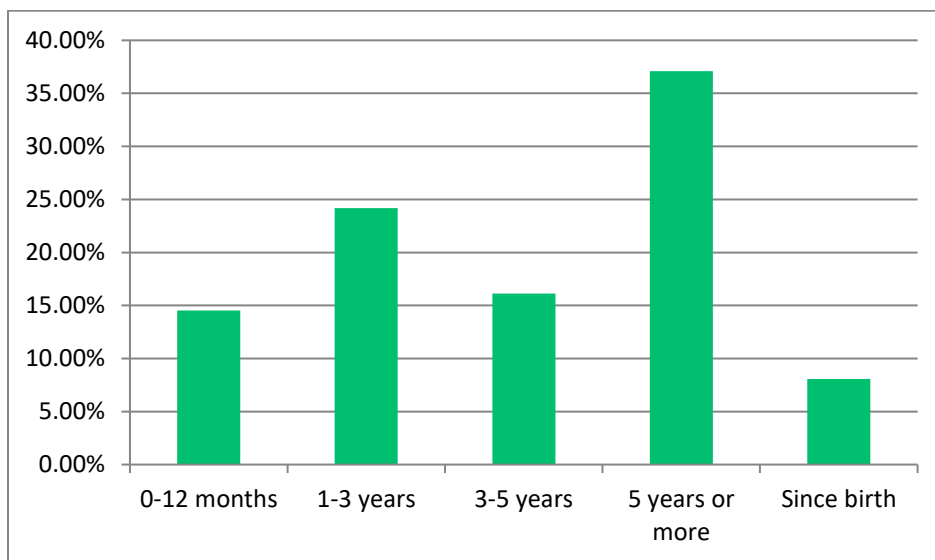
Figure 5.3
Severity of Disability, Health Condition, Impairment or Limitation



Length of Time with a Disability

Most respondents (37.10 percent) indicated having experienced their respective disabilities five years or longer. Only 8.06 percent reported being born with a disability.

Figure 5.4
Length of Time with a Disability



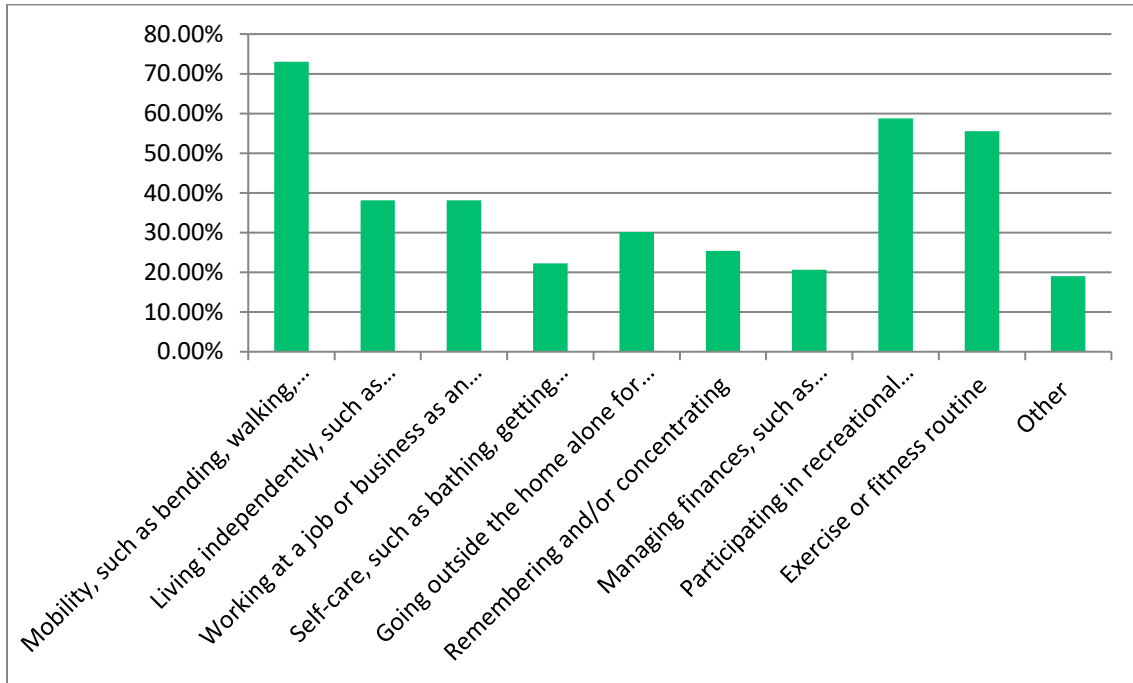
Limitations on Major Life Activities

Participants were asked to identify all major life activities that have been limited due to their disability/health conditions.

- By far, the most-reported limitation was mobility (73.02 percent), such as bending, walking or climbing stairs.
- “Participating in recreational activities,” at 58.73 percent, closely followed by “Exercise or fitness routine” at 55.56 percent.
- “Living independently” and “working at a job” responses were both 38.10 percent each.
- Difficulty “remembering or concentrating” was cited at 25.40 percent.

- “Self-care” represented responses of 22.22 percent, with “Managing finances” closely following at 20.63 percent.
- “Other” life activities included social abilities, schoolwork, speech, emotional health, driving, traveling, biking or attending events.

Figure 5.5
Limitations on Major Life Activities

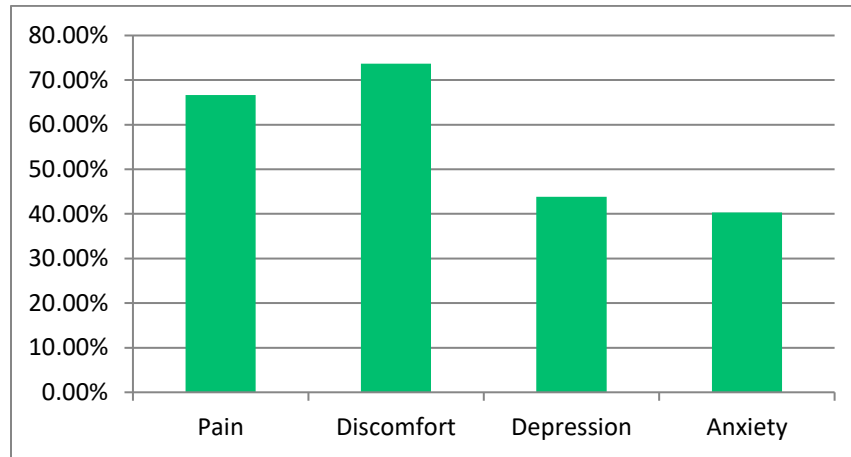


Maladies Routinely Experienced

Respondents were asked if they experienced maladies of pain, discomfort, depression or anxiety. Respondents were allowed to select more than one malady.

- 73.68 percent of responses indicated “discomfort” was experienced.
- “Pain” at 66.67 percent followed.
- “Depression” (43.86 percent) and “Anxiety” (40.35 percent) were the third and fourth most experienced malady, respectively.

Figure 5.6
Maladies Routinely Experienced

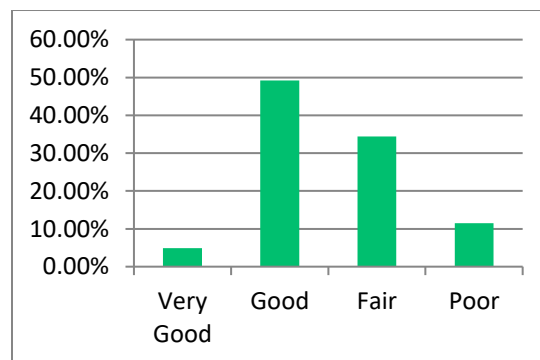


Perceived Overall Health Status

Most responding caregivers (15.15 percent) self-identified as mothers. Daughters represented 6.06 percent of responding caregivers/family members. Paid caregivers represented 6.06 percent as well. Overall, the majority of survey respondents felt they or the person for whom they were answering were in good health.

- 4.92 percent classified themselves as in “very good” health.
- 49.18 percent felt they were in “good” health.
- 34.43 percent experienced “fair” health, while 11.48 percent had “poor” health.

Figure 5.7
Perceived Overall Health Status



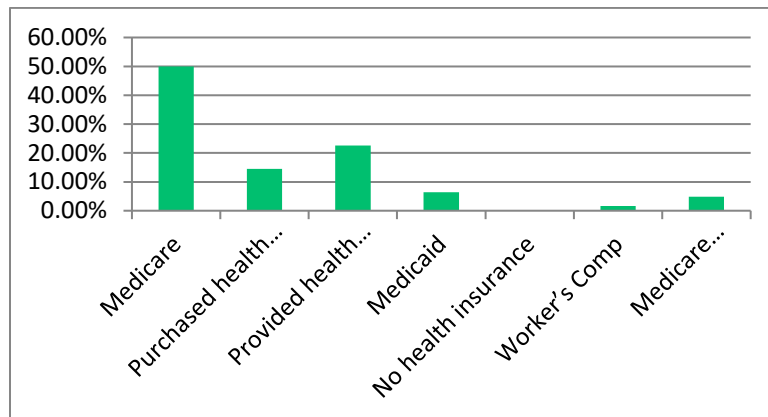
CHNA: Access to Health Care Services

Sources of Health Insurance

Participants' most common (50 percent) source of health insurance was Medicare.

- Employer-provided health insurance was the second-most common source at 22.58 percent.
- Medicaid was 6.45 percent, and purchased health insurance was 14.52 percent.
- 1.61 percent of respondents receive worker's comp.
- None of the respondents was without health insurance.

Figure 5.8
Sources of Health Insurance

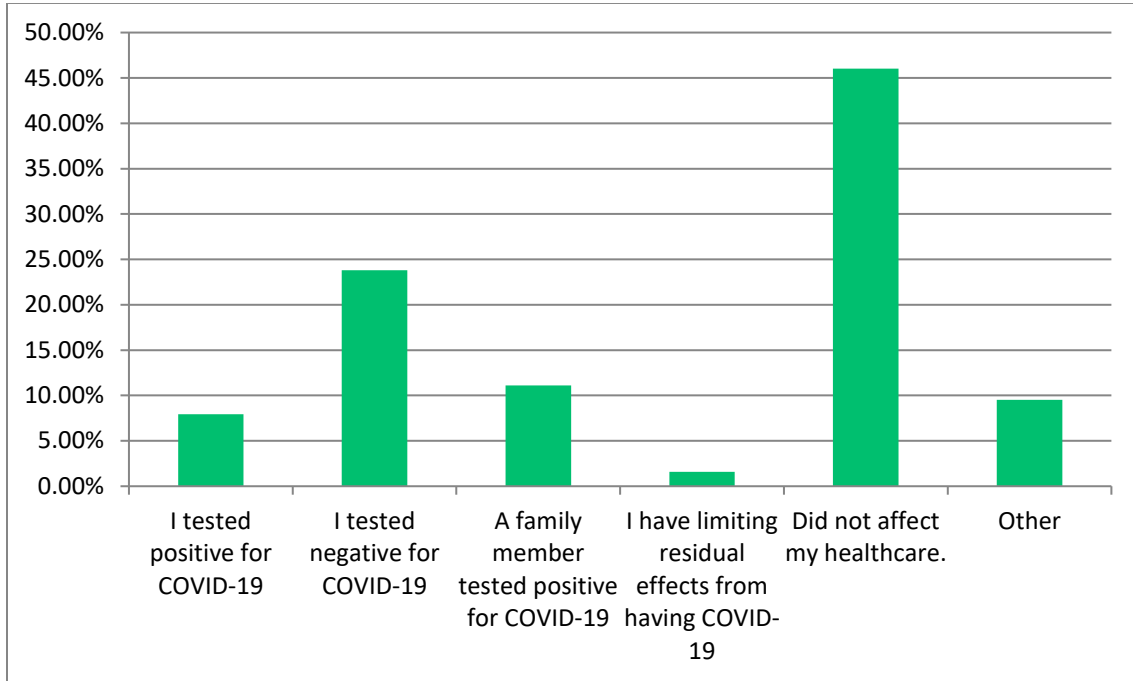


COVID-19 Effects

Participants were asked to respond how they have been affected by COVID-19.

- The majority of respondents (46.03 percent) reported that COVID-19 did not affect their healthcare.
- 23.91 percent reported a negative COVID-19 test.
- 11.11 percent reported a family member's COVID-19 test was positive.
- Only 7.94 percent reported testing positive for COVID-19.
- "Other" responses included isolation, evidently referring to quarantines or lockdowns.

**Figure 5.9
COVID-19 Effects**



Barriers to Accessing Healthcare via Telehealth

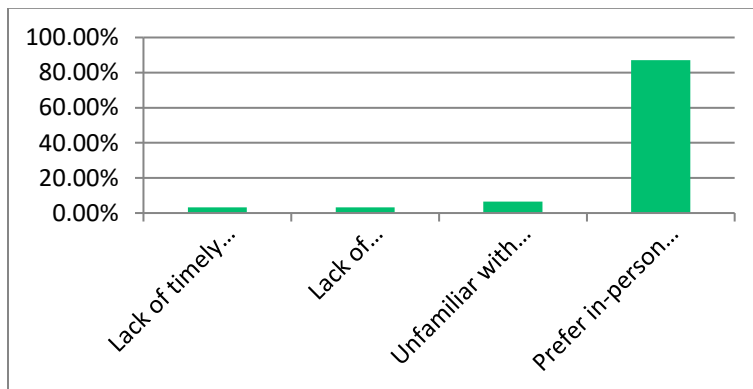
More than half (61.29 percent) of respondents reported they had accessed healthcare via a telehealth service during the COVID-19 pandemic, while 38.71 percent said they did not.

- However, 74.19 percent said they would consider utilizing a telehealth program.
- 25.81 percent said they would not utilizing telehealth.

For those preferring not to utilize telehealth, the overwhelming majority (87.10 percent) said they would prefer an in-person visit.

- Unfamiliarity with technology would discourage 6.45 percent from using telehealth.
- Lack of a timely appointment (3.23 percent) and a lack of appropriate technology device (3.23 percent) were cited as impediments to using telehealth.

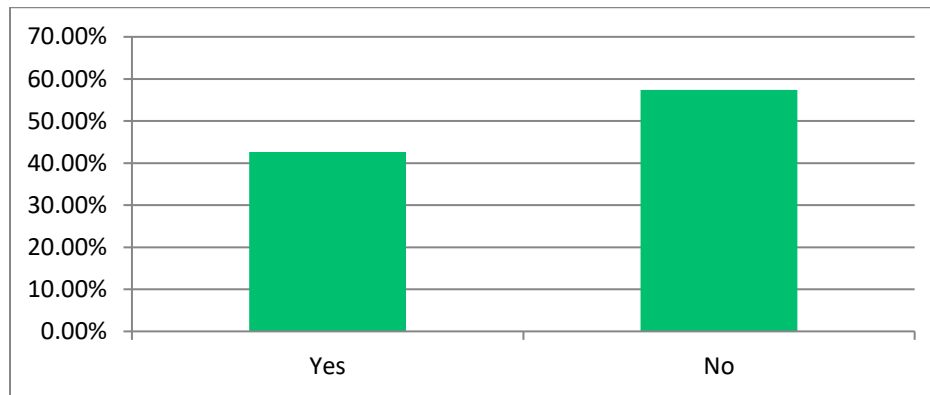
**Figure 5.10
Barriers to Accessing Healthcare via Telehealth**



Effect of COVID-19 on Medical Treatment

Most respondents (57.38 percent) reported they did not postpone medical treatment because of the COVID-19 pandemic, while 42.62 percent said they did.

Figure 5.11
Effect of COVID-19 on Medical Treatment



Lack of Health Care Access

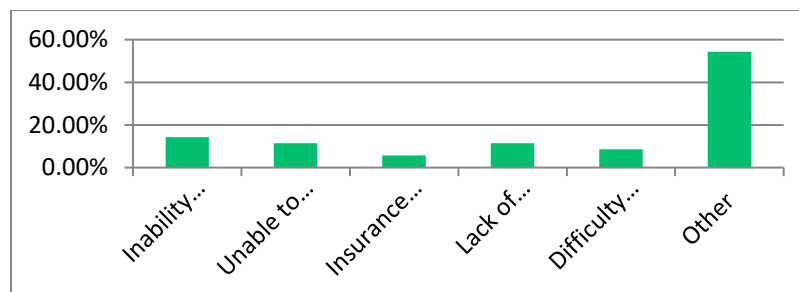
Participants were asked if there was a time in the past year when care for a particular concern related to their disability was needed but unavailable.

- 18.64 percent of respondents reported in the affirmative.
- 81.36 percent answered “no.”

When asked for a reason for the lack of access, 14.29 percent reported inability to find a physician. Additionally,

- 11.43 percent were unable to pay for services or co-pay;
- Another 11.43 percent reported lack of timely appointment;
- 8.57 percent reported difficulty with transportation to and from an appointment;
- Insurance coverage was not accepted by the provider for 5.71 percent of respondents.
- More than half (54.29 percent) of respondents cited “other” reasons for lack of access to healthcare, such as living “out of area,” choosing to isolate because of COVID-19, dependent on others for transportation, or facility had closed.

Figure 5.12
Lack of Health Care Access

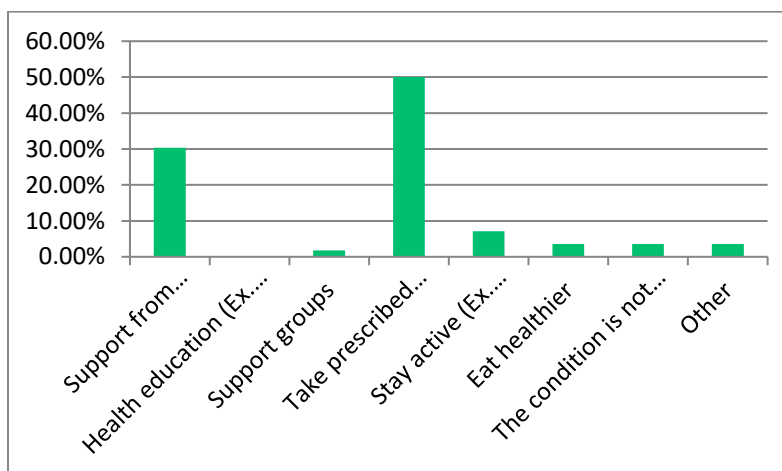


Personal Management Methods of Chronic Health Conditions

Participants with a chronic health condition such as diabetes, heart disease, asthma, or high cholesterol reported on a variety of management methods.

- 50 percent take prescribed medication to manage their condition, while 30.36 percent received support from a healthcare provider.
- 7.14 percent stay active with exercise or other physical activity and another 3.57 percent eat healthier.
- 3.57 percent reported the condition is not kept under control.
- 1.79 percent reported support groups as a way to manage their condition.

Figure 5.13
Personal Management Methods of Chronic Health Conditions



Perceived Value of Educational Materials and Prevalence of In-Home Rehabilitation

The majority (79.66 percent) of the 63 respondents reported they were provided educational materials relating to their disabilities, and 88.24 percent felt the information was helpful. Almost three-fourths (71.93 percent) felt additional information would not be beneficial.

For those respondents physically unable to leave their homes, 73.53 percent did not receive rehabilitation services from a home health provider, while 26.47 percent did (Table 5.1).

Table 5.1
Perceived Value of Educational Materials and Prevalence of In-Home Rehabilitation

Survey Question	Yes	No
Were you provided with educational materials regarding your disability?	79.66%	20.34%
Was the educational material helpful?	88.24%	11.76%
Is there additional information that would benefit you?	28.07%	71.93%
Did you receive rehabilitation services from a home health provider?	26.47%	73.53%

Satisfaction with Health Care Services as Perceived by Respondents

Respondents were then asked to rate their satisfaction with a variety of health care services, most of which were satisfied or very satisfied (Table 2.2).

Table 5.2
Satisfaction with Health Care Services as Perceived by Respondents

Health Care Services	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied	Not Applicable
Access to physical rehabilitation services	1.69%	8.47%	30.51%	50.85%	8.47%
Quality of healthcare that I receive	0.00%	6.90%	37.93%	50.00%	5.17%
Quality of care I receive from my caregiver	0.00%	0.00%	21.05%	35.09%	43.86%
Access to medical services and health care	1.69%	11.86%	37.29%	40.68%	8.47%
Access to affordable and adequate health insurance	5.00%	15.00%	35.00%	33.33%	11.67%
Affordability of my prescriptions	3.39%	23.73%	45.76%	20.34%	6.78%
Access to education related to my health	1.69%	11.86%	54.24%	23.73%	8.47%
Knowledge and awareness of health services and resources that are available to me	3.39%	10.17%	49.15%	30.51%	6.78%
Quality of life now	5.08%	30.51%	49.15%	11.86%	3.39%

CHNA: Transportation

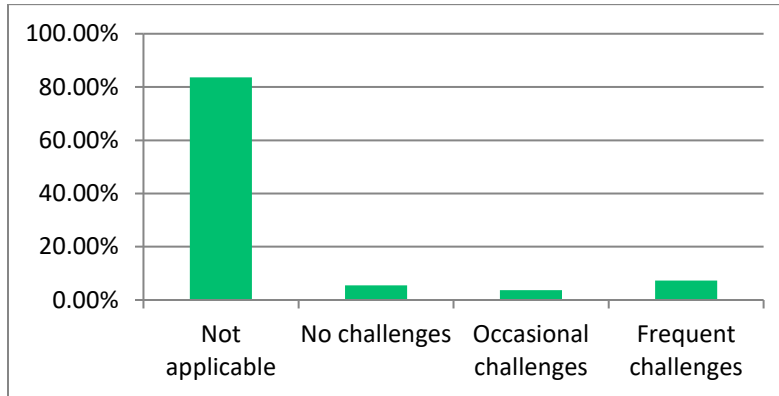
Most respondents (78.95 percent) reported never having any trouble getting to medical appointments or therapy visits. A few (3.51 percent) experienced trouble several times a month, and 1.75 percent experienced trouble once a week.

Difficulty in Using Public Transportation

Most participants (83.64 percent) answered “not applicable” to the question as to whether they experienced challenges using public transportation due to their disabilities.

- 5.45 percent of respondents reported they have experienced no challenges.
- 3.64 percent reported occasional challenges.
- 7.27 percent reported frequent challenges to transportation.

Figure 5.14
Difficulty in Using Public Transportation



CHNA: Employment

Current Employment Status

Participants were asked about their current employment status, as well as their perceptions of challenges and barriers related to employment.

- Unemployment status accounted for 6.9 percent of respondents.
- 58.62 percent of respondents categorized themselves as retired.
- 17.24 percent classified as “Other,” which includes unemployment due to disability or inability to work, or being a caregiver to another family member.
- Full-time employment was reported by 12.07 percent.
- A small percentage (5.17 percent) classified themselves as working part-time.

Figure 5.15
Current Employment Status



Disability Barriers to Employment

Participants were asked if they felt their disabilities were a potential barrier to employment. Less than half (43.6 percent) indicated disability was not a potential barrier to employment. The remaining respondents (56.36 percent) indicated their disabilities were seen as a barrier to employment opportunities.

Table 5.3

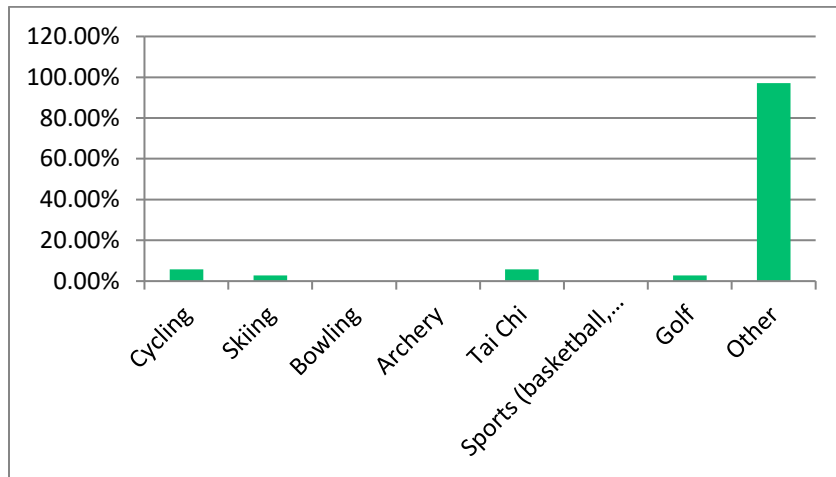
Do you feel your disability is/was a potential barrier to employment?	
Answer Choices	Responses
Yes	56.36%
No	43.64%

CHNA: Adaptive Recreation / Exercise

Involvement in Recreational Activities

Participants were queried as to their involvement in recreational activities. Less than half (45.61 percent) reported themselves engaged in some type of activity, such as cycling (5.71 percent), Tai Chi (5.72 percent), skiing (2.86 percent) and golfing (2.86 percent). Most (97.14 percent) indicated “Other” activities, which included walking, auto racing, stationary bike/elliptical in fitness gym, swimming, “family activities,” bridge group, support group, pool exercise, kayaking, hiking, or yard work.

**Figure 5.16
Involvement in Recreational Activities**

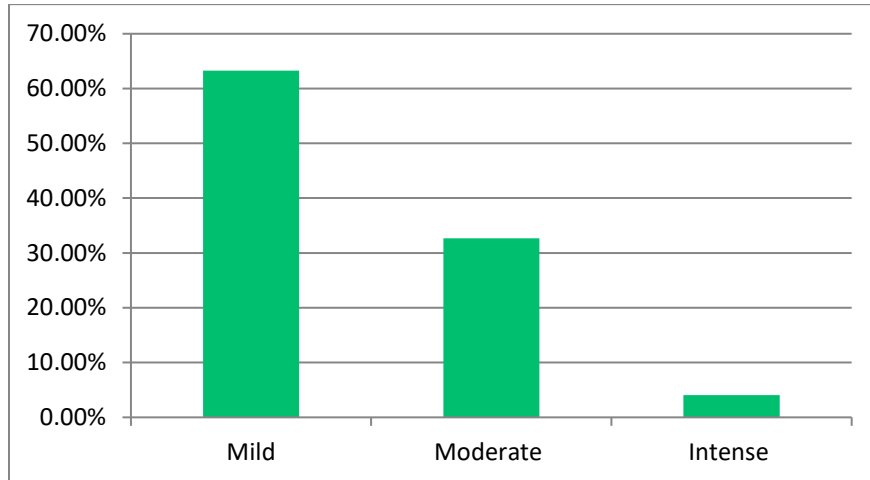


Intensity of Regular Physical Exercise/Activity

However, most respondents (60.71 percent) reported they currently participate in regular physical exercise or activity.

- Most respondents (63.27 percent) reported their exercise/activity session was of mild intensity.
- 32.65 percent engaged in exercise of a moderate intensity.
- Only 4.08 percent rated their activity as intense.

Figure 5.17
Intensity of Regular Physical Exercise/Activity



Reasons for Not Exercising

Most of the respondents who do not engage in regular physical exercise or activity reported this was due to fear of engaging because of their health conditions (25 percent).

- 17.86 percent cited ignorance as to the type of exercise they should engage in.
- 14.29 percent said they did not like to exercise, and another 14.29 percent cited fitness center expense as a barrier to regular exercise.
- 10.71 percent reported nearby exercise classes were inappropriate for their situations, and 7.14 percent reported there were no fitness facilities near their homes.
- 3.57 percent reported they were unable to leave home; lack of transportation kept another 3.57 percent from exercising; and an additional 3.57 percent stated there were no fitness facilities near their homes.

Table 5.4

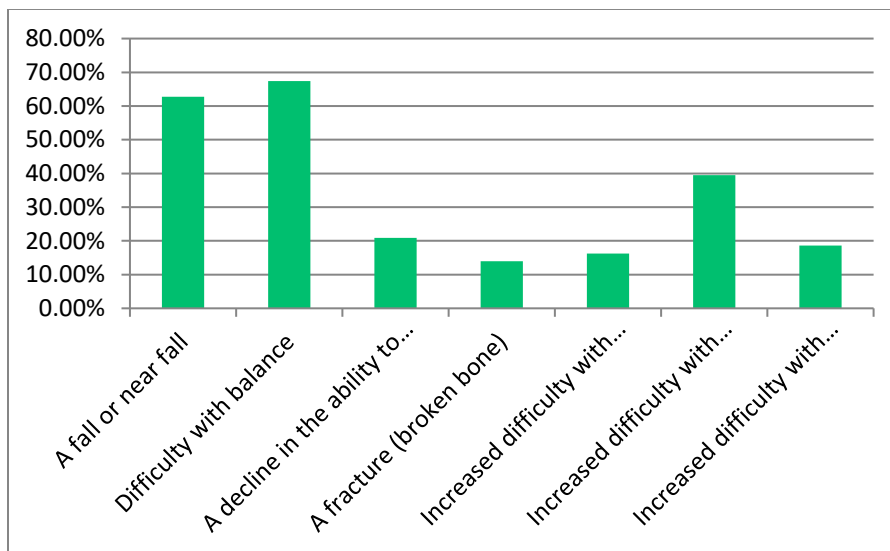
I do not exercise regularly because . . .	
Answer Choices	Responses
I am physically unable to leave home	3.57%
I am unable to go to an exercise facility because of lack of transportation	3.57%
The exercise classes near me are not appropriate for my situation	10.71%
There are no exercise classes near me that I can join	7.14%
I cannot afford to join a gym or fitness facility	14.29%
I am afraid to exercise because of my health condition	25%
I don't know which exercises to do	17.86%
I don't like to exercise	14.29%

Health Concerns: One Year

Participants were then asked to respond to health or medical episodes with the past 12 months.

- More than half (62.79 percent) experienced a fall or near fall in the last year, and 67.44 percent reported difficulty with balance.
- More than a third (39.53 percent) reported increased difficulty with walking.
- 20.93 percent cited a decline in the ability to care for themselves.
- 18.60 percent experienced increased difficulty with vision, while 16.28 percent cited increased difficulty with speech, communication or swallowing.
- Fractures accounted for 13.95 percent of responses.

Figure 5.18
Health Concerns: One Year



F. SISKIN HOSPITAL CHNA CONCLUSIONS

The overall perceptions of health care consumers of the availability of, and access to, health services in Siskin Hospital's service area appear positive. Participants seem to be satisfied with access to medical services, prescription affordability, and insurance and educational materials. However, a number of opportunities for improvement were identified. We have listed them below, together with a progress report on our implementation plan.

Consumer: Identified Needs / Implementation Plan Progress

- **Transportation assistance to health services**
 - We offer Telehealth Rehabilitation Services, which helps those with transportation difficulties access needed care.
- **Access to rehabilitation services**
 - Our East Brainerd outpatient clinic has moved to a larger, more convenient location that accommodates more patients.
 - Our "Direct Access" program allows for patient self-referral for outpatient physical therapy services.
 - Our new Hixson outpatient clinic serves patients in North Chattanooga.
 - Our telehealth services serve those who cannot or prefer not to come in for in-person rehabilitation.
 - We added additional inpatient beds.
- **Quality of healthcare and caregiving**
 - Patient discharge surveys are being utilized with the goal of continuous improvement in customer satisfaction.
 - Our Subacute Program has recently been designated a CMS 5-star facility, the only such facility in Chattanooga.
 - We received recognition by Newsweek (August 2020) as being among the nation's best physical rehabilitation facilities, and by U.S. News & World Report (December 2020) as being among the nation's top 15 percent of best-performing short-term rehabilitation facilities.
 - We have collaborated with the University of Tennessee Chattanooga and Hamilton County Schools to provide the clinical portion of a new CNA course. This effort to meet the growing needs of front-line caregivers will help Siskin Hospital, among other healthcare organizations, continue to provide quality care to our patients.
- **Employment opportunities for individuals with disabilities**
 - Through its involvement with Project SEARCH, our Vocational Services program evaluates, instructs, and assists the disabled with employment skills and community re-entry.
- **Knowledge of resources available**
 - Until COVID-19, condition-specific support groups met monthly at Siskin Hospital to inform, educate, and support. Some of these groups continued to meet virtually in 2020; we hope to resume in-person meetings when it is safe to do so.
 - Condition-specific print and digital educational materials are provided to our patients and their families.

- Quality of life
 - Comprehensive inpatient care includes instruction to patients and families on navigating a life with disability. Patient education continues with outpatient treatment to build on the progress being made. Additionally, our medical model fitness center guides individuals post-recovery to optimizing health and fitness levels despite a disability.

Community: Identified Needs / Broader Community Needs

The majority of survey participants appear satisfied with the services provided by Siskin Hospital and the accessibility of its rehabilitation programs. Siskin Hospital admits patients through a single point of entry, which has streamlined the admissions process considerably. Currently, we are revising the outpatient admissions process as well.

Some additional identified needs, together with a progress report on our implementation plan, are:

- Charity Admissions
 - Siskin Hospital served 210 patients with insufficient insurance in Fiscal Year 2020. The total of this charity care was \$683,229.
 - The need here continues to be great and we will continue to stretch available resources within existing financial constraints.
- Insurance limitations
 - Siskin Hospital will continue to identify and secure contracts with insurance providers.
- Information
 - Until COVID-19, we provided life skills training to families of disabled patients and the disabled through a number of support groups. Though some continued to hold virtual meetings, we expect in-person meetings to resume when it is safe to do so.
 - Educational opportunities for community education may exist through a partnership with other hospitals/agencies.
 - Family members are part of the rehabilitation program during their loved one's stay; they receive individualized instruction to be better equipped to care for the patient following discharge. Due to the critical importance of family involvement in the patient's successful transition to home, we were able to safely continue this training throughout the pandemic.
- Transportation
 - We continue to give careful consideration to this opportunity in our next strategic plan.

At the same time, we recognize several factors affecting community needs that Siskin Hospital cannot readily address, such as:

- An aging population
- Economic instability
- Uninsured status
- Risky behaviors

The primary purpose of Siskin Hospital's Community Health Needs Assessment is to align community-focused initiatives with the identified health goals defined by federal, state, and county level health services agencies. As such, the Siskin Hospital CHNA makes use of data obtained from the Tennessee Department of Public Health, various federal agencies and Siskin Hospital's primary research detailed above. The shared objective of this surveillance and reporting is reducing health disparities and improving the health of the community served. By understanding the health priorities of the larger population, Siskin Hospital leaders identify the needs of at-risk populations within its own service area. From this understanding, specific community benefit strategies and tactics are developed and will be included in the organization's next strategic plan. Thereafter, Siskin Hospital leadership plans to repeat the survey process tri-annually as required.

Siskin Hospital's core competency is the treatment and rehabilitation of individuals with disabilities resulting from injuries, accidents, illnesses, or congenital defects. In general, individuals in these categories tend to experience higher percentages of health disparities than the larger population. These added challenges can result in further impaired mobility, nutritional deficits and an increased susceptibility to chronic medical conditions. Despite increased health risks, people with disabilities are rarely targeted by specific health-promotion and disease-prevention efforts.

G. SISKIN HOSPITAL COMMUNITY BENEFITS STRATEGIC CONNECTION

Identified Needs

DISABILITY

Chronic diseases and conditions—such as heart disease, stroke, cancer, diabetes, obesity, and lung disease—are among the most common, costly and preventable of all health problems. Six in 10 American adults have at least one chronic condition, and four in 10 has two or more chronic conditions. (19) Many chronic diseases result in disability.

Approximately 54,434 Hamilton County individuals live with a disability, representing 14.8 percent of the county’s total population. (20) According to the “Americans with Disabilities: 2014” report, more than 85.3 million Americans had some form of disability in 2014. Of these, 55.2 million had a severe disability. Disabilities are defined as severe or non-severe. (21)

Table 7.1
Examples of Severe and Non-Severe Disability

Activity/Condition	Severe	Non-Severe
Use a wheelchair, cane, crutches or walker	X	
Serious difficulty seeing or hearing	X	
Difficulty performing functional activities*	X	
Difficulty with one or more Activities of Daily Living**	X	
Alzheimer’s	X	
Developmental disability	X	
Learning disability		X
High blood pressure		X
<i>Source: Taylor</i> *speaking, lifting/carrying 10 pounds, using stairs, walking ¼ mile, grasping small objects **getting in/out of bed/chair, bathing, dressing, eating, toileting, getting around at home		

Disability Domains

Disabilities can be grouped into three main domains: Physical, communicative, and mental.

In the physical domain, Taylor reports 48.2 million people with a lower or upper body functional limitation. Among adults with either limitation, lower body functional limitations were more common at 87.7 percent than upper body functional limitations at 61.7 percent.

- Used a wheelchair (12.9 million);
- Used a cane, crutches or walker (5.5 million);
- Had difficulty lifting something as heavy as a 10-pound bag of groceries (24.5 million);
- Had difficulty grasping objects (13.3 million);

- Had difficulty going out or getting in/out of bed/chair (28.9 million).

The total number of people who have a limitation in communication is more than 34.3 million, or 14.3 percent of adults 18 or older.

- Was blind or had difficulty seeing (12.3 million);
- Was deaf or had difficulty hearing (17.1 million);
- Had difficulty having their speech understood (4.9 million).

Table 7.2

Disability Domains by Sex for Adults 18 Years and Older: 2014

(Numbers in thousands)

Category	Total		Communication		Mental		Physical		One domain only		Two or more domains	
	Number	Margin of error (±) ¹	Percent	Margin of error (±) ¹	Percent	Margin of error (±) ¹	Percent	Margin of error (±) ¹	Percent	Margin of error (±) ¹	Percent	Margin of error (±) ¹
Total, 18 and older.....	240,054	274	11.8	0.36	13.7	0.44	27.8	0.50	21.1	0.45	14.2	0.44
Male.....	115,815	199	12.8	0.53	13.2	0.58	23.8	0.64	19.1	0.63	13.5	0.55
Female.....	124,239	202	10.9	0.46	14.2	0.60	31.6	0.62	22.9	0.63	14.9	0.57

¹ A margin of error is a measure of an estimate's variability. The larger the margin of error is in relation to the size of the estimate, the less reliable the estimate. For further information on the source of the data and accuracy of the estimates, including standard errors, margins of error, and confidence intervals, see <www.census.gov/content/dam/Census/programs-surveys/sipp/methodology/SSA%20Supplement%20Users%20Guide.pdf>.

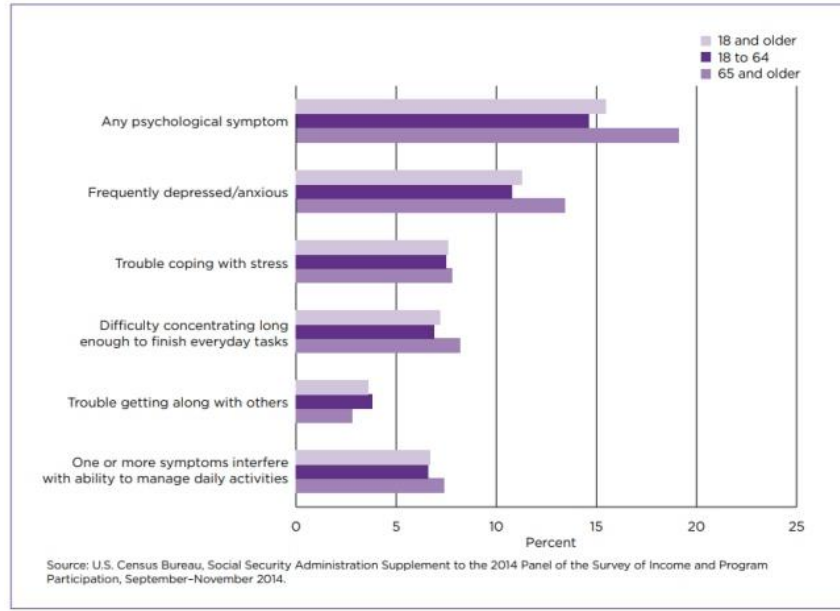
Source: U.S. Census Bureau, Social Security Administration Supplement to the 2014 Panel of the Survey of Income and Program Participation, September–November 2014.

Prevalence of Disability Symptoms

Cognitive, mental and emotional conditions can also lead to limitations of activity such as those described above.

- Almost 10 percent, or a total of 23.2 million Americans, had a limited mental/cognitive function.
- This included conditions such as learning disabilities (3.5 percent), Alzheimer’s or dementia (3.3 percent), intellectual disabilities (1.2 percent) and developmental disorders (0.6 percent).
- Cognitive conditions are more common among adults over 65.
- 27 million adults were frequently depressed or anxious.
- Had some other mental or emotional condition, such as coping with stress, trouble concentrating, or trouble getting along with others, that seriously interfered with everyday activities (37.7 million).

Figure 7.1
Prevalence of Selected Symptoms by Age: 2014



Prevalence of Disability

Based on the broad measure of disability used in the Social Security Administration Supplement:

- Approximately 85.3 million (27.2 percent) American adults had a disability in 2014.
- Of those, about 55.2 million people had a severe disability. (Table 7.3)
- Fewer than half (47.2 percent) of individuals aged 18-64 with a disability were employed compared to 77.5 percent of individuals without a disability.
- Disability severity influences unemployment; 68.4 percent of adults in 2013 with non-severe disabilities were employed, while 34.8 percent of severely disabled adults were not. (21)
- 28.6 percent of adults aged 18-64 with severe disabilities experienced poverty, compared to 12.9 percent of adults without disability. (21)

Table 7.3
Prevalence of Disability for Selected Age Groups: 2014
(in thousands)

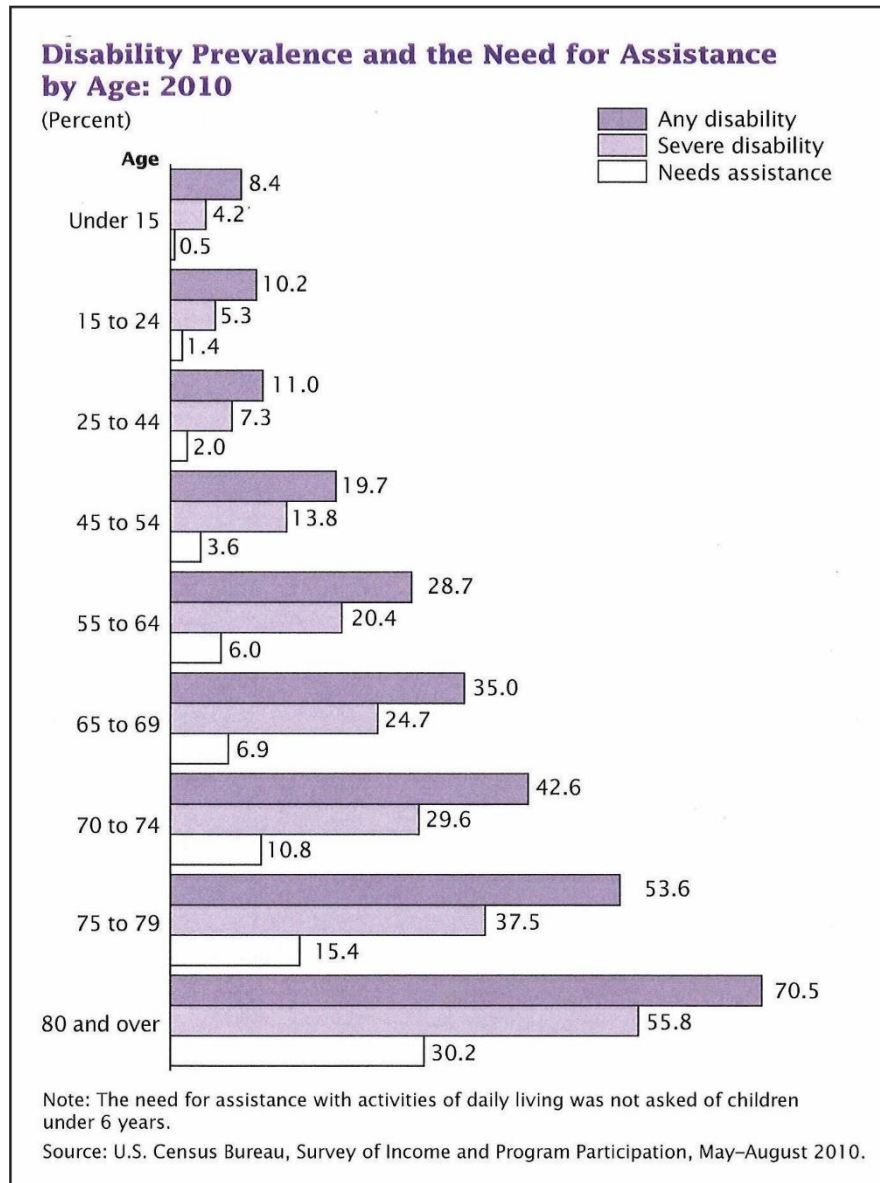
Category	Number	Percent
All Ages Total Population	313,584	100.0
All Ages with a disability	85,289	27.2
All Ages with a severe disability	55,158	17.6
All Ages with a non-severe disability	30,131	9.6
Less than 18 years	73,530	100.0
Total with a disability	12,557	17.1
Severe disability	7,230	9.8
Non-severe disability	5,327	7.2
Aged 18 to 64	175,762	100.0
With a disability	32,834	18.7
Severe disability	47,928	27.2
Non-severe disability	24,804	14.1
Needs assistance	24,229	13.7
Aged 65 and older	45,266	100.0
With a disability	26,494	58.5
Severe disability	18,810	41.6
Non-severe disability	7,684	17.0
Needs assistance	8,856	19.6
<i>Source: US Census Bureau, Social Security Administration Supplement to the 2014 Panel of the Survey of Income and Program Participation, September-November 2014.</i>		

Disability Prevalence and Need for Assistance

For individuals with a chronic disease or disabling condition, the need for ongoing assistance with everyday tasks to function must be provided by a caregiver. Recipients of care live in both residential and institutional settings. The demand for caregiving is steadily increasing due to the burgeoning older adult population. In 2020, the population of adults over the age of 60 is projected to be more than 77 million. (22)

Reliable census data demonstrates an increase in the prevalence of disability as the population ages. People in the oldest group, 80 and above, are 70.5 percent likely to have a disability, more than eight times the likelihood of disability under age 15.

Figure 7.2



Senior Health Rankings

The poor health of people with disabilities is often compounded by health problems related to their primary disability, such as health complications of impaired mobility, nutritional deficits and an increased susceptibility to secondary medical conditions. For example, precursors of common chronic diseases, such as physical inactivity, obesity, hypertension and high cholesterol, are all more prevalent among persons with a disability than those without. Despite these higher health risks, persons with a disability are often overlooked by health promotion and disease prevention efforts.

Research conducted by United Health Foundation shows that seniors are the largest consumers of health care as advancing age necessitates the need for more frequent use. Annually, adults 65 and older spend nearly twice as much as 45 to 64-year-olds on health

care. They spend three to five times more than all adults younger than 65. The health needs of older adults are not only more expensive but also vastly different from the younger population. Nearly 80 percent of seniors have already been diagnosed with at least one chronic condition and half have been diagnosed with at least two. The widespread prevalence of chronic disease among older adults results in increased visits to doctors, more medications prescribed and a decline in overall well-being and quality of life.

- The Foundation’s “America’s Health Ranking: Senior Report 2017” ranks U.S. states based on behaviors, community and environment, clinical care and policy.
- Tennessee, Georgia and Alabama are among the 10 least-healthy states for seniors.
- Tennessee ranks 44. It has the highest prevalence of smoking among the states, a high prevalence of physical inactivity, and a low percentage of able-bodied seniors.
- Georgia ranks 41. It has a high hip fracture hospitalization rate, a low percentage of quality nursing home beds, and a high prevalence of smoking.
- Alabama ranks 43. It has a high premature death rate, a high prevalence of smoking, and a low prevalence of high health status. (23)
- Lower state health rankings put resident seniors with disabilities at even greater risk for health complications.

Table 7.4
Senior Health Rankings: Tennessee, Georgia, Alabama

Determinant	Tennessee		Georgia		Alabama		No. 1 State
	Value	Rank	Value	Rank	Value	Rank	
Dental Visit	58.6	43	62.1	37	57.9	44	78.1
Depression	8.4	40	8.2	38	8.8	46	4.6
Excessive Drinking	3.8	2	5.3	12	4.5	8	3.3
Pain Management	46.7	25	48.5	14	53.4	3	54.9
Smoking	13.8	50	10.2	37	10.2	37	5.2
Volunteerism	21.6	36	20.3	41	23.3	30	45.9
Physical Inactivity	3.1	44	32.4	27	38.5	45	21.6
Hip Fractures	7.3	46	7.1	44	8.2	42	3.0
Poverty	9.8	39	9.7	38	9.9	40	4.5
Obesity	27.7	21	29.7	34	30.2	38	17.9

Source: America’s Health Rankings Senior Report 2017

Percentage of Adults Reporting a Disability

In addition, both Tennessee and Alabama are among the 10 states that have the highest percentage of disability. Georgia is one of 10 states that have a moderately high percentage of disability.

- All three states report a higher percentage of disability than the national average.

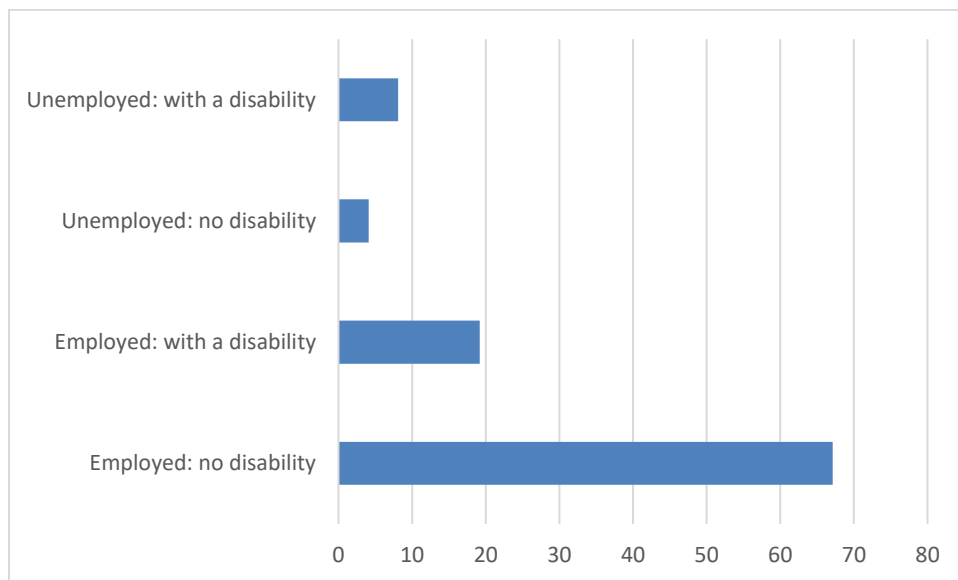
Table 7.5
Percentage of Adults Reporting a Disability
2018

Tennessee	Georgia	Alabama	U.S.
31.4%	27.6%	31.6%	25.7%

Source: CDC Disability and Health Data System

Healthy People 2020 identifies quality of life improvement as a central public health goal related to self-reported chronic diseases and additional risk factors. These factors have a significant impact on the morbidity and mortality rates, especially in individuals with disabilities. (24) A health-related quality of life (HRQOL) evaluation includes factors of mental and physical health perceptions, health risks and conditions, functional status, social support and socioeconomic status. Siskin Hospital uses HRQOL to identify resources, policies and practices that influence the functional status and health perceptions of individuals with disabilities.

Figure 7.3
U.S. Employment Status by Disability Status
Civilian non-institutionalized population over 16 years



Source: Bureau of Labor, July 2019

Employment Status by Disability Status

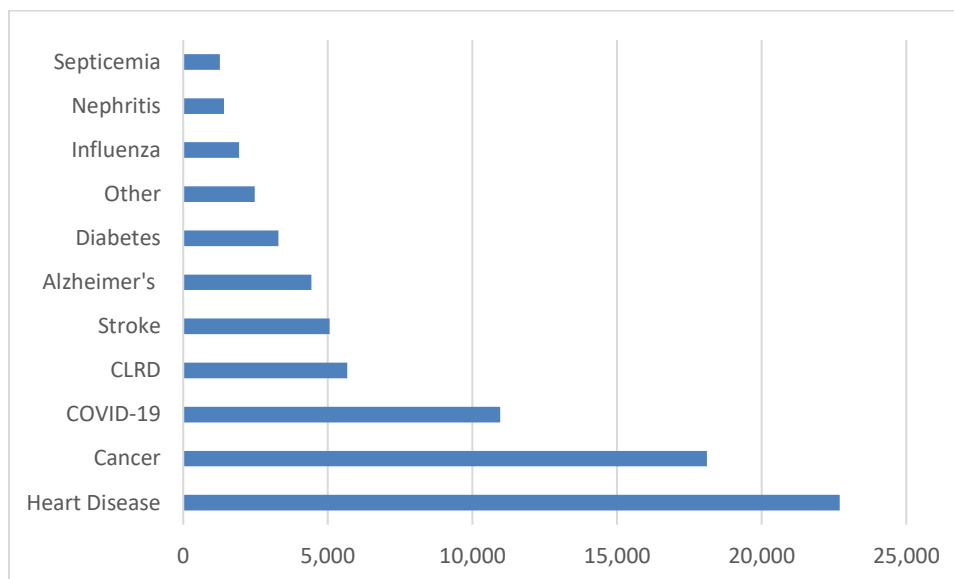
People with disabilities can bring a unique set of skills to the workplace, enhancing the diversity and strength of the U.S. labor market. Yet, according to the National Organization on Disability, only one in five working-age Americans with disabilities is employed. This is a productive power loss of more than 45 million potential workers. More than two-thirds of people with disabilities live in poverty, a rate almost twice as high as for everyone else. (25, 26)

Siskin Hospital offers a Vocational Services Program for individuals with a disability who live in proximity to the hospital. The program provides a crucial link in the continuum of physical rehabilitation in the return to a productive, meaningful life in the community and workforce.

COVID-19

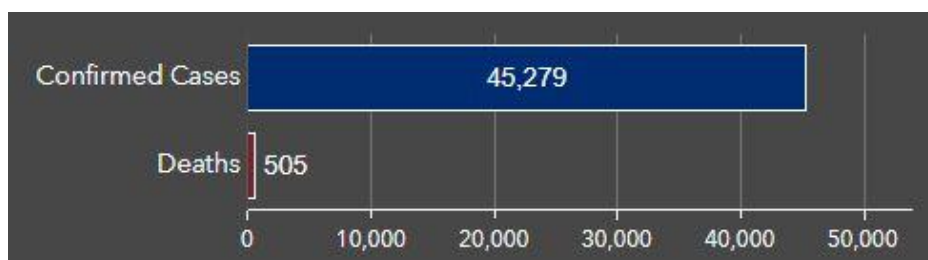
The global pandemic that began in December 2019 riveted the nation’s attention on mortality data, though the total number of deaths attributed by the CDC to COVID-19 alone is about half the number of concurrent deaths for either cancer or heart disease. According to the CDC, the current (January 2020-March 2021) number of U.S. deaths attributed to COVID-19 as the underlying cause is 490,175. Tennessee’s COVID-19 death rate for the same time period is 10,964. (27) A total of 505 Hamilton County residents have died from the virus as of June 17, 2021. (28)

Figure 7.4
Tennessee Counts of Death: 2020 – March 2021



Source: Centers for Disease Prevention and Control

Figure 7.5
Hamilton County Total COVID-19 Deaths



As of 6/17/21. Source: Johns Hopkins University & Medicine Coronavirus Resource Center.

Of particular concern to practitioners of physical health and medicine is the “long haulers” phenomenon. These patients, who have recovered from the worst effects of COVID-19 and have tested negative, still experience symptoms that can last weeks or months. The virus can damage the lungs, heart and brain, increasing the risk of long-term health problems.

Siskin Hospital’s Caring After COVID Program provides multi-disciplinary rehabilitation to help ensure recovery of health and independence. While the most common post-COVID-19

effects are deconditioning, weakness and fatigue, individuals may also suffer from a variety of impairments, including respiratory difficulties, cognitive issues such as memory loss and difficulty concentrating, and psychological problems. The Caring After COVID Program, from inpatient to outpatient to medical-model fitness center, seeks to return post-COVID-19 patients back to functional, satisfying lives through a full continuum of therapy services and patient education.

HEART DISEASE AND STROKE

Together, heart disease and stroke are among the most widespread and costly health problems facing the nation today, accounting for more than \$320 billion in health care expenditures and related expenses annually. (24) As shown in Figure 6.2, both of these conditions are among the top causes of death in Siskin Hospital's primary service area.

Siskin Hospital's Stroke Unit is staffed by experienced therapists in Stroke Rehabilitation and the latest in equipment and treatment modalities. With the sharp increase of stroke occurrence in younger individuals, Siskin Hospital created the Young Stroke Program to help these younger patients return to fully-functioning lives while addressing risk factors that may have caused the stroke in the first place. Both stroke patients and caregivers receive extensive education, training and resources to help them understand and manage impairments and complications from the stroke, reduce the risk of having another stroke and decrease environmental barriers. Psychological and coping needs are met through individual counseling, peer counselors and support groups. Also available are services to help patients continue their recovery after returning home, such as follow-up medical care in the Stroke Aftercare Program, Outpatient Therapy Services, and the Next Step and Healthy Heart programs at the Siskin Health & Fitness Center.

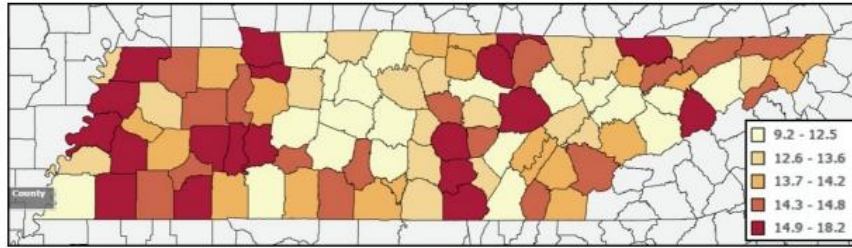
DIABETES

Diabetes was the seventh leading cause of death in the United States in 2017. As of 2018, 34.2 million Americans or 10.5 percent of the population had diabetes, with 1.5 million new diagnoses every year.

- The prevalence of diabetes in seniors remains high at 26.8 percent, or 14.3 million seniors. (29)
- About 200,000 non-traumatic lower-limb amputations are performed every year. In the U.S., diabetes is diagnosed every 17 seconds, and every day 230 Americans with diabetes will experience an amputation. In fact, 85 percent of all amputations were the result of a diabetic foot ulcer. (30)
- About 67 percent of non-traumatic lower-limb amputations among people aged 20 years or older occur in people with diagnosed diabetes (31)

In the last 20 years, the number of adults diagnosed with diabetes has doubled as America aged and became obese. However, rates have increased more rapidly in the Southeast during the same period, and as of 2016, this region's rates of diagnosed diabetes are higher than the national average. (32)

Figure 7.6
Diagnosed Diabetes Percentages in Tennessee Counties: 2012-2014



Source: Centers for Disease Control and Prevention, Division of Diabetes Translation, *US Diabetes Surveillance System*. Available at <https://www.cdc.gov/diabetes/data>.

The Siskin Hospital Amputee Program offers:

- Treatment for upper- and lower-extremity amputations.
- A thorough evaluation by qualified physical and/or occupational therapists.
- Specific education and training related to wearing and using prosthesis.
- Treatment and activities that accelerate independence in self-care activities.
- In-house prosthetic vendor makes custom fitting easier.

ACCIDENT/INJURY

Nationally, injuries result in significant disability and mortality.

- Among the top 15 killers for all-aged Americans are unintentional injuries and those caused by acts of violence.
- For Americans aged 1 to 44, injuries are the number one cause of death.
- Injuries are a leading cause of disability for all ages, regardless of sex, race/ethnicity or socioeconomic status.

Beyond the immediate health consequences, injuries have a significant effect on the well-being of Americans by resulting in:

- Premature death
- Years of potential life lost
- Disability and disability-adjusted life years lost
- Poor mental health
- High medical costs
- Lost productivity

According to *Healthy People 2020*, most events resulting in injury, disability or death are predictable and preventable. More attention must be given to better understand the trends, causes and prevention of unintentional injuries, such as:

- Individual behaviors – choices people make such as alcohol or drug use, or risk-taking;
- Physical environment – home and community that affect the rate of injury related to falls, fires and burns, traffic injuries, drowning, violence;
- Access to health services, such as systems created for injury-related care, ranging from pre-hospital and acute care to rehabilitation, can mitigate the consequences of death or long-term disability; and

- Social environment – individual social relationships, community environment, societal-level factors. (33)

In Tennessee, fatal injuries result in an astounding 132 thousand years of potential life lost in a single year. While fatal injuries are tragic, this represents just a small portion of the actual burden of injury in the state. Tennesseans by the thousands face disability and chronic pain in the years to come, due to often predictable and preventable injuries.

- 5,219 fatal injuries occurred in 2014.
- Each day there are about 14 deaths due to injuries, 98 hospitalizations for treatment of an injury, and 1,754 visits to an emergency room for an injury.
- For Tennesseans aged 1 to 44, unintentional injury is the primary cause of death. (34)
- Hamilton County had 237 accidental deaths in 2019; Tennessee accidental deaths were 4,858. (35)

TRAUMATIC BRAIN INJURY

Each year, about 25,000 Tennesseans receive a traumatic brain injury (TBI), primarily through falls, traffic accidents and homicide/violent injury. Males are twice as likely as females to sustain a TBI. TBIs can include concussions as well. (36)

In 2018, 8,023 patients were reported to Tennessee’s TBI registry. Of these, 7,141 were discharged alive from the hospital, with 35 percent resulting in the need for further treatment post-hospitalization, such as inpatient or outpatient rehabilitation therapy.

- 58 percent of all TBIs reported to the registry occurred in adults over 54 years, with women aged 75-84 comprising the largest population.
- Accidental falls were the leading cause of external cause of injury-related TBI in 2018.
- 60 percent of TBI patients were males. The number of male patients exceeded females in every age group less than 75 years.
- Gender differences varied among racial groups:
 - White males comprised 57 percent
 - Black males comprised 71 percent
 - Hispanic males comprised 75 percent
- Most registry patients (79 percent) sustained moderate TBIs. Fewer patients were diagnosed with mild (12 percent), severe (5 percent) and penetrating (5 percent) brain injuries. Table 7.6 describes the levels of TBI severity.
- The total number of Tennessee TBI registry patients increased 8.4 percent in one year.
- Hamilton County had 338 TBI registry patients, with a state ranking of 38 of 61 (“1” reflecting the highest number of TBI registry patients per 100,000 residents). (37)

**Table 7.6
Criteria for Levels of TBI Severity**

Mild TBI	Moderate TBI	Severe TBI	Penetrating TBI
<ul style="list-style-type: none"> • Confused or disoriented state which lasts less than 24 hours or • Loss of consciousness for up to 30 minutes or • Memory loss lasting less than 24 hours <p><i>Excludes penetrating TBI</i></p>	<ul style="list-style-type: none"> • Confused or disoriented state which lasts more than 24 hours or • Loss of consciousness for more than 30 minutes, but less than 24 hours or • Memory loss lasting more than 24 hours, but less than 7 days or • Meets criteria for mild TBI, but with an abnormal CT scan <p><i>Excludes penetrating TBI</i></p>	<ul style="list-style-type: none"> • Confused or disoriented state which lasts more than 24 hours or • Loss of consciousness for more than 24 hours or • Memory loss lasting more than seven days <p><i>Excludes penetrating TBI</i></p>	<ul style="list-style-type: none"> • Head injury in which the scalp, skull, and dura mater (the outer layer of the meninges) are penetrated

Source: Tennessee Health Department, Traumatic Brain Injury Program 2019

From inpatient to outpatient to our medical-model fitness center, Siskin Hospital’s Center for NeuroRecovery, opened in 2016, offers an unparalleled scope of neurological services in the Chattanooga region. Our Brain Injury Unit treats both traumatic and non-traumatic brain injuries in a state-of-the-art unit specializing in the care and rehabilitation of patients who have a brain injury. Certified Brain Injury Specialists provide the highest standard of care, using the most current, evidence-based practices, which achieve better outcomes and improves patient satisfaction with the therapy they receive. Patients receive ongoing support and assistance through the Hospital’s Outpatient Program, the Siskin Health & Fitness Center, and several partnering organizations that work specifically with individuals who have suffered a brain injury.

BEHAVIORAL HEALTH

The term “behavioral health” often describes the connection between behaviors and the health and well-being of the body, mind and spirit. This includes behaviors such as eating habits, drinking or exercising that either immediately or over time affect physical or mental health. Mental health, substance abuse and addictions are also often included. Broader factors, such as living in an area with high pollution or experiencing high levels of stress over a long period of time, can also affect well-being.

An estimated one in five U.S. adults had a mental illness in 2019, or 51.5 percent of all U.S. adults. Types of mental illnesses can range in degree of severity from mild to moderate to severe. These conditions are divided into two broad categories: Any Mental Illness (AMI) and Serious Mental Illness (SMI). According to the National Institute of Mental Health,

- Any mental illness (AMI) is defined as a mental, behavioral, or emotional disorder. AMI can vary in impact, ranging from no impairment to mild, moderate, and even severe impairment.

- Serious mental illness (SMI) is defined as a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities. (38)

Tennessee Department of Mental Health and Substance Abuse Services reports 4,117 face-to-face assessments for mental health emergencies in 2017 among Hamilton County residents. This number, 12 per 1,000, is six times larger than the Tennessee rate of two assessments per 1,000. (1)

It is important to recognize the critical interplay between individual health, medical treatment and behavioral health, and improving outcomes. Those with co-occurring behavioral health and medical illnesses often incur the highest health care costs over time. The presence of co-occurring behavioral health conditions is associated with:

- Increased severity of medical encounters, and
- In many cases, reduced compliance with medical care regimens. (39)

Siskin Hospital's psychologists and neuropsychologists have specialized training in Behavioral Medicine and Rehabilitation Psychology to assist individuals living with a chronic medical illness or who have endured a traumatic injury. Affected individuals and their families frequently encounter heightened levels of stress, feelings of grief and loss, and changes in their quality of life. Our psychologists provide in-depth evaluation and treatment of emotional and behavioral factors affecting adjustment and recovery.

MOVEMENT DISORDERS

Chronic, often painful and debilitating, movement disorders affect a person's ability to control movement. A movement disorder can make routine activities difficult, even impossible. More than 40 million Americans—nearly one in eight people—are affected by a movement disorder. (40) This is more than the number of people with diabetes and more than twice the number of those surviving cancer.

Movement disorders are caused by damage to or malfunction in specific regions of the brain and nervous system responsible for voluntary and involuntary movement. In many people, the cause is unknown. The onset of symptoms associated with a movement disorder may occur gradually over time or develop suddenly. Though no cure exists for movement disorders, they can be effectively managed if properly diagnosed and treated, allowing patients to live with less pain, fewer limitations and greater confidence.

Movement disorders include:

- Ataxia
- Cervical Dystonia
- Chorea
- Dystonia
- Functional Movement Disorder
- Huntington's Disease
- Multiple System Atrophy
- Myoclonus
- Parkinson's Disease
- Progressive Supranuclear Palsy

- Restless Leg Syndrome and Reflex Sympathetic Dystrophy/Periodic Limb Movement Disorder
- Tardive Dyskinesia
- Tourette's Syndrome
- Tremor
- Wilson Disease (41)

These chronic diseases evidence an increasing prevalence in old age and pose a major challenge to patients, families and health care systems. According to researchers, movement disorders will increase considerably between 2010 and 2050. (42)

The Center for NeuroRecovery treats any number of neurologically impaired patients in a patient-centered rehabilitation environment. Neurological diagnostic technologies allows therapists to identify and measure impairments that in the past were difficult to measure. Diagnoses are followed by evidence-based treatment technologies to address neurological deficits.

Siskin Hospital's special treatment programs, such as the LSVT BIG and LOUD therapies for Parkinson's, address the physical manifestations of movement disorders. In addition, the Tai Chi Program and Aqua Pilates provide numerous health benefits to those with neurological or musculoskeletal conditions.

Siskin Hospital also offers a wheelchair seating and positioning program; an augmented communication program; therapists with specialty training for movement disorders; and videofluoroscopy, or VFSS, to evaluate swallowing problems.

H. SISKIN HOSPITAL PROGRAMS THAT BENEFIT COMMUNITIES SERVED

I. Telehealth Therapy Services

COVID-19 necessitated the development of alternate delivery methods for various outpatient therapy services. In the comfort and safety of their own homes, patients may opt to continue their therapy progress via secure technology in real-time video calls with their therapists. Physical, occupational and speech therapies, along with behavioral medicine, are available in telehealth, as well as in-person, sessions.

II. Siskin Hospital's Community Care Program

Siskin Hospital provides charity care to those who have sustained a disability through accident, illness or injury within the community it serves. Charity care is provided for those patients without insurance or without the means to cover the cost of their treatment.

III. Charitable Assistance for Assistive Devices

Providing charitable support to individuals who are without access to assistive devices or technology is important to Siskin Hospital. We work with community agencies to provide patients who are discharging with the equipment and education they need to prevent them from experiencing barriers at home, in the workplace or the community at large.

IV. Professional Training, Education, Clinical Research Activities

Siskin Hospital believes in the importance of continuing education and professional training for our associates to better serve those with disabilities in our community.

The Neurologic Physical Therapy Residency Program, created in 2019, has graduated one resident; a second resident is presently in training. The program equips new physical therapists with the most current evidence-based practices to provide neurologic patients with the highest stand of care.

The transition-to-practice Nurse Residency Program provides annual training in a rehabilitation setting for two cohorts of six participants each. In this program, a total of 12 new graduates that have obtained LPN or RN degrees and with less than one year's experience have the opportunity to apply textbook theory to actual practice. New nurse graduates receive educational support in leadership, patient outcomes, and the role and responsibilities of the professional nurse.

Siskin Hospital provides clinical rotations for nursing students from Lee University, Southern Adventist University, University of Tennessee Chattanooga, Cleveland State Community College, Chattanooga State Community College, and Chattanooga College.

In 2020, Siskin Hospital collaborated with the University of Tennessee Chattanooga and Hamilton County Schools to develop an accredited Certified Nursing Assistant program to support current and future demand for frontline healthcare workers. Two separate programs, one for high school students and another for community members, are offered. All program participants complete clinical rotations at Siskin Hospital as part of the certification process.

Associates participate in ongoing training opportunities to obtain special certifications in a variety of treatment areas including nursing, brain injury, stroke, physical and occupational therapy, and speech therapy.

As of April 2021, 56 percent of our eligible nursing associates are CRRN (Certified Rehabilitation Registered Nurse) certified. In addition, several diverse certifications have been obtained since the last CHNA:

- Mechanical Diagnosis and Therapy
- Neurological Clinical Specialist
- Certified Brain Injury Specialist
- Certified Employment Support Professional
- Geriatric Certified Specialist
- Orthopedic Clinical Specialist
- Certified Integrated Manual Therapist
- Low Vision Rehabilitation
- Certified Exercise Expert for Aging Adults
- Certified Lingraphica Specialist
- Wound and Ostomy Nurse certification
- Certification in Infection Prevention and Control
- McKenzie certification
- Certified Ergonomics Assessment Specialist
- Vestibular Rehabilitation
- LSVT BIG
- Specialty Certification in Low Vision
- Neuromuscular Electrical Stimulation
- Manual Lymph Drainage and Complete Decongestive Therapy

The Siskin Hospital Knowledge Translation Project is currently underway, underwritten by a \$20,000 grant from the Academy of Neurologic Physical Therapy. This research project seeks to implement standardized measurement on the Inpatient Stroke Unit. Funds are being used to identify the barriers clinicians have to using standardized measurement, design and implement strategies to ensure patients received standardized measurement, and implement processes within the physical therapy department to sustain the use of these measures after the project is completed.

In addition, an apraxia of speech research project is underway in Siskin Hospital's Speech-Language Pathology Department that will compare two different treatments for this disorder for stroke patients whose medical episode occurred within the prior six months before project participation.

We also initiated the No Pass Zone, a falls prevention project to heighten the focus on fall prevention, with participation in Tennessee Hospital Association's Falls Collaborative. Moreover, we have submitted several presentations for upcoming conferences.

V. The Siskin Health & Fitness Center

The Siskin Health & Fitness Center is a place where the able-bodied and the disabled can work out side by side, focusing on personal strengthening and fitness goals. With a highly-

trained staff and access to Siskin Hospital's therapy associates, the Siskin Health & Fitness Center is the ideal transition for patients to continue to expand and strengthen their functional independence following outpatient treatment.

Additionally, the Fitness Center is available to all members of the community. It is considered to be a comfortable, safe place for people of all abilities, including those less fit, seniors and persons with varying degrees of disability. The majority of Siskin Health & Fitness Center members are over age 65, former patients or disabled individuals. To make the facility widely available to this population, Siskin Hospital subsidizes its operation, allowing the membership rates to remain affordable.

The Siskin Health & Fitness Center also offers a variety of health- and fitness-oriented programs. Specialized adapted classes include:

- Adapted Tai Chi and seated exercise programs serve specialized needs.
- The 12-week Cancer FIT Program, supervised by Certified Cancer Exercise Trainers, is tailored to individual needs at any stage of a cancer diagnosis.
- The Healthy Heart Program is a supervised program designed for patients who have completed cardiac rehabilitation, have known risks for heart disease, or simply want to improve their overall health.
- As part of the continuum of care, we are proud to offer the Next Step Program at the Siskin Health & Fitness Center. In nine weeks, fitness center members learn the essentials of exercise and continue their rehabilitation progress after being discharged from inpatient and outpatient care.

VI. Advocacy

Siskin Hospital is an advocate for our patients, the community and other individuals living with a disability through a variety of programs designed to encourage those we serve to continue working, living independently and pursuing education. The Hospital promotes and supports advocacy for individuals on local, state, regional and national levels. These advocacy programs and activities include:

- **Vocational Assistance** – Our Vocational Services associates work closely within Project SEARCH with local businesses, organizations, and agencies to increase equality and diversity in the employment of people who have a disability.
- **Tennessee Yellow DOT Program** - The Tennessee Yellow DOT Program is designed to provide first responders with an individual's medical information in the event of an emergency on Tennessee's roadways. The information can mean the difference between "life and death" in the "Golden Hour" immediately following a serious incident. Siskin Hospital is an enrollment site for the program, and distributes a Yellow DOT decal and a Yellow DOT folder. Associates assist enrollees in completing the medical information sheet, which consists of their emergency contact information, medical information, recent surgeries, hospital preferences, current medications, insurance and physicians' information. This information is the sole responsibility of the participant and remains in the glove compartment inside the yellow folder provided.

- **Older and Disabled Driver Safety Evaluation** – Siskin Hospital has supported the community with its Driver Evaluation Program for a number of years. Developed by a joint effort of neuropsychologists, occupational therapists and experienced driving evaluators, this program includes on and off-road driving evaluations for patients, screenings and treatment for low vision, cognitive evaluations, education and support. In addition, Siskin Hospital associates have presented the program at local assisted living facilities to promote safe driving for the elderly and disabled.

Siskin Hospital works closely with the Tennessee Department of Transportation, Haman’s Driving School, and local ophthalmologists and psychologists to ensure that individuals who progress through the Driving Program at Siskin Hospital receive the education, training and equipment needed to drive safely. The program introduces alternative transportation options when they are needed, as well.

- **Advancing Continuing Education** – Siskin Hospital recognizes the need for continuing education and supports those who desire to further their knowledge and training in physical medicine and rehabilitation. A number of our nursing associates have completed the Certified Rehabilitation Registered Nurse (CRRN) certification to secure additional training for rehabilitation care. We also encourage and support associates to obtain specialty certifications in brain injury, stroke, lymphedema and other treatments. Some tuition costs and expenses are reimbursed by Siskin Hospital. Nursing scholarships have been provided for a number of years and were initially funded by an external grant provided by the Wright-Bentley Foundation. Siskin Hospital also received full funding from the Tennessee Hospital Association’s Promise of Nursing Grant, which provided the resources to six nursing students for a 10-week intensive summer internship. Additionally, a working partnership with the University of Tennessee at Chattanooga has developed into a doctorate program for occupational therapy. Our Nurse Residency Program and the Neurologic PT Residency Program both train current clinicians in advanced disciplinary care in a rehabilitation setting. Our partnership with the University of Tennessee Chattanooga and Hamilton County Schools provides a clinical practice setting for new frontline healthcare workers.
- **Community Support Groups** – Siskin Hospital understands the importance of camaraderie and encouragement outside the hospital setting. For this reason, and up until March of 2020, the hospital hosted or sponsored support groups designed to address the social, emotional, medical and legal issues facing community members and their families. Some of the groups offered prior to March 2020 at Siskin Hospital included: ALS, Amputee, Brain Injury, Epilepsy, Low Vision, Parkinson’s, Spinal Cord and Stroke. These programs were free and open to the general community. Since March 2020, some groups continue to meet virtually until it is safe to resume in-person meetings.
- **Food and Clothing Drives** – Siskin Hospital has undertaken food drives to benefit Chattanooga Food Bank. Associates annually perform fundraisers for the Patient Care Fund, which provides clothing and other therapy needs that patients are unable to provide for themselves.
- **Community Education Programs** – Siskin Hospital believes strongly in the importance of educating both our patients and ourselves. We provide educational notebooks to patients in the Stroke, Brain Injury, Amputee Programs and Spinal

Cord Injury Programs. These books provide educational information for all aspects related to their diagnosis, such as clinical care, mobility, self-care, self-advocacy, and community resources. The Hospital hosts continuing education courses available to the community as well as community service information via our social media platforms on topics such as the importance of sleep, healthy diet and exercise, combatting stress, and more.

In addition, several of our occupational and physical therapists as well as speech-language pathologists are guest lecturers and lab assistants at the University of Tennessee Chattanooga. Associates staff booths at aging seminars and career fairs, present as guest speakers to CABIA conferences, and teach discipline-specific courses at state organizations.

Each year Siskin Hospital's inpatient therapy departments take on a cohort of therapy students at various levels in their course of study. Its nursing department provides clinical experiences for local college and university nursing students, and provides guest lecturers on request. Siskin Hospital has representation on the local boards of the Tennessee Psychological Association, Epilepsy Foundation and Mental Health Active Response Team.

- **Unique Therapy Programs** – Regionally-unique therapy programs address identified needs, and specialty programs have been developed to include:

- Center for Swallowing Disorders
- Center for NeuroRecovery
- Low Vision Program
- Balance and Dizziness Program
- Aquatic Therapy
- Behavioral Medicine and Rehabilitation Psychology
- Lymphedema
- Hand Therapy
- LSVT Big and Loud treatment for Parkinson's
- Cognitive Rehabilitation
- Osteoporosis
- Pain Rehabilitation
- Pediatric Behavioral Medicine
- Pelvic Floor Program
- Spasticity
- TMJ and Headache

Siskin Hospital also received a \$54,984 multi-year grant from the Chattanooga Ophthalmologic Foundation to increase and improve services for persons with impaired vision.

I. WORKS CITED

- (1) Picture of Our Health 2019. Hamilton County Health Department Community Health Profile.
<https://health.hamiltontn.org/Portals/14/DataPublications/Docs/2019%20Report%20Final%202019-02-28.docx.pdf>
- (2) Quick Facts. United States Census.
<https://www.census.gov/quickfacts/hamiltoncountytennessee>
- (3) American Community Survey data. U.S. Census Bureau. <https://data.census.gov>
- (4) County Health Rankings & Roadmaps: Tennessee.
<https://www.countyhealthrankings.org/app/tennessee/2021/overview>
- (5) America's Health Rankings 2020
https://www.americashealthrankings.org/explore/annual/measure/Health_Status/state/TN
- (6) "Population Projections for the State of Tennessee 2019 to 2070." Tennessee State Data Center/Boyd Center for Business and Economic Research (UTK).
<https://tnsdc.utk.edu/estimates-and-projections/boyd-center-population-projections/>
- (7) Bureau of Labor Statistics. <https://www.bls.gov/cps/>
- (8) American Community Survey data. U.S. Census Bureau. <https://data.census.gov> and USDA Economic Research Service. <https://data.ers.usda.gov>
- (9) U.S. Department of Health and Human Services. <https://health.gov/our-work/healthy-people/healthy-people-2030/health-literacy-healthy-people-2030/history-health-literacy-definitions>
- (10) "Health Literacy Interventions and Outcomes: An Updated Systematic Review." Agency for Healthcare Research and Quality.
<https://archive.ahrq.gov/research/findings/evidence-based-reports/litupsum.html>
- (11) "Boyd Center Population Projections: Gains in Middle Tennessee, More Seniors." The University of Tennessee Knoxville News webpage: Dec. 10, 2019.
<https://news.utk.edu/2019/12/10/boyd-center-population-projections-gains-in-middle-tennessee-more-seniors/>
- (12) "Key facts about the uninsured population." Kaiser Commission on Medicaid and the Uninsured. Henry J. Kaiser Family Foundation. Nov. 6, 2020.
<https://www.kff.org/uninsured/issue-brief/key-facts-about-the-uninsured-population/>
- (13) "Health Insurance Coverage in the United States 2019." U.S. Census:
<https://www.census.gov/content/dam/Census/library/publications/2020/demo/p60-271.pdf>
- (14) 2012 National Healthcare Quality Report. Agency for Healthcare Research and Quality. <http://www.ahrq.gov/research/findings/nhqrdr/nhqr12/chap9.html>
- (15) Tennessee Department of Health Joint Annual Report, 2019.
<https://apps.health.tn.gov/publicjars/default.aspx>
- (16) Dignity Health Community Need Index. <https://www.dignityhealth.org/about-us/community-health/community-health-programs-and-reports>

- (17) County Health Rankings & Roadmaps: 2021 Tennessee Report
https://www.countyhealthrankings.org/sites/default/files/media/document/CHR_2021_TN.pdf
- (18) County Health Rankings & Roadmaps: 2020 Tennessee Report
<https://www.countyhealthrankings.org/reports/state-reports/2020-tennessee-report>
- (19) “Chronic Diseases in America.” (Infographic by CDC’s National Center for Chronic Disease Prevention and Health Promotion).
<https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm>
- (20) “Percent of People with a Disability by U.S. County.” Disabled World, 2020:
<https://www.disabled-world.com/disability/statistics/scc.php#county>
- (21) Taylor, Danielle M. “Americans With Disabilities: 2014.” U.S. Census Bureau, November 2018.
<https://www.census.gov/content/dam/Census/library/publications/2018/demo/p70-152.pdf>
- (23) Administration for Community Living. U.S. Department of Health and Human Services. <https://acl.gov/aging-and-disability-in-america/data-and-research/projected-future-growth-older-population>
- (24) 2017 America’s Health Rankings: Senior Report. United Health Foundation.
https://assets.americashealthrankings.org/app/uploads/ahr2017_seniorreport.pdf
- (25) “Healthy People 2020.” U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion.
<http://www.healthypeople.gov/2020/topics-objectives/topic/heart-disease-and-stroke>
- (26) National Organization on Disability. <https://www.nod.org/>
- (27) Houtenville, A. and Rafal, M. (2020). Annual Report on People with Disabilities in America: 2020. Durham, NH: University of New Hampshire, Institute on Disability
file:///C:/Users/dtaub/Downloads/AnnualReport_DigitalVersionEdits_2.5_WithCovers%20REDUCED.pdf
- (28) Weekly Counts of Deaths by State and Select Causes, 2020-2021. Centers for Disease Control and Prevention. <https://data.cdc.gov/NCHS/Weekly-Counts-of-Deaths-by-State-and-Select-Causes/muzy-jte6>
- (29) Johns Hopkins University & Medicine Coronavirus Resource Center.
<https://coronavirus.jhu.edu/us-map>
- (30) American Diabetes Association. <http://www.diabetes.org/diabetes-basics/statistics/>
- (30) “Increasing Awareness This National Diabetes Month Can Save Limbs and Lives.” Foluso A. Fakorede, MD: Nov. 29, 2018. The American Journal of Managed Care.
<https://www.ajmc.com/view/increasing-awareness-this-national-diabetes-month-can-save-limbs-and-lives>
- (31) The Diabetes Council. <https://www.thediabetescouncil.com/diabetes-and-amputation-everything-you-need-to-know-to-avoid-amputation/>
- (32) Centers for Disease Control Prevention.
<https://www.cdc.gov/diabetes/home/index.html>
- (33) “Healthy People 2020.” U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion.

- <https://www.healthypeople.gov/2020/topics-objectives/topic/injury-and-violence-prevention>
- (34) Violence and Injury Prevention Program. Tennessee Department of Health. <https://www.tn.gov/health/health-program-areas/fhw/vipp.html>
- (35) Tennessee Department of Health: <https://www.tn.gov/health/health-program-areas/statistics/health-data/death-statistics.html> and “Number of Deaths from Accidental Causes With Rates Per 100,000 Population, by Race, Tennessee Resident Data, 2016.” https://www.tn.gov/content/dam/tn/health/documents/TN_Deaths_Accidental_Causes_-_2016.pdf
- (36) Tennessee Department of Health: Traumatic Brain Injury Program. <https://www.tn.gov/health/health-program-areas/fhw/vipp/tbi.html>
- (37) “Traumatic Brain Injury Surveillance and Program Report 2018-2019.” Tennessee Department of Health, Division of Family Health and Wellness. August 2019. <https://www.tn.gov/content/dam/tn/health/program-areas/tbi/TBI-Annual-Report-2018-2019.pdf>
- (38) National Institute of Mental Health. Data provided from the National Survey on Drug Use and Health (NSDUH) <http://www.nimh.nih.gov/health/statistics/prevalence/any-mental-illness-among-adults.shtml>
- (39) Sterling, Stacy, M.P.H., M.S.W.; Felicia Chi, M.P.H.; and Agatha Hinman. “Integrating Care for People With Co-Occurring Alcohol and Other Drug, Medical, and Mental Health Conditions.” <https://pubmed.ncbi.nlm.nih.gov/23580018/>
- (40) Parkinson & Movement Disorder Alliance. <https://www.pmdalliance.org/>
- (41) Movement Disorders. MayoClinic.org. <https://www.mayoclinic.org/diseases-conditions/movement-disorders/symptoms-causes/syc-20363893>
- (42) Bach, J.P., U. Ziegler, G. Deuschl, R. Dodel, G. Doblhammer-Reiter. “Projected numbers of people with movement disorders in the years 2030 and 2050.” <https://pubmed.ncbi.nlm.nih.gov/22021158/>