



Shriners Hospitals for Children® — Salt Lake City



2018 Community Health Needs Assessment

Shriners Hospitals for Children® - Salt Lake City

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Mission and Vision

Mission:

- Provide the highest quality care to children with neuromusculoskeletal conditions, burn injuries and other special health care needs within a compassionate, family-centered and collaborative care environment.
- Provide for the education of physicians and other health care professionals.
- Conduct research to discover new knowledge that improves the quality of care and quality of life of children and families.

This mission is carried out without regard to race, color, creed, sex or sect, disability or national origin or ability of a patient or family to pay.

Vision:

Become the best at transforming children's lives by providing exceptional healthcare through innovative research in a patient and family-centered environment.

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Statement of Approval

The 2018 Community Health Needs Assessment (CHNA) Report for Shriners Hospitals for Children – Salt Lake City satisfies Section 501(r)(3) which was added to the Internal Revenue Code by the Patient Protection and Affordable Care Act, Public Law 111-148 (124 STAT. 119). This 2018 Community Health Needs Assessment and Action Plan were both reviewed and approved by the Shriners Hospitals for Children® – Salt Lake City (SHC-SLC) executive leadership team and Board of Governors.

Our Commitment to the Community

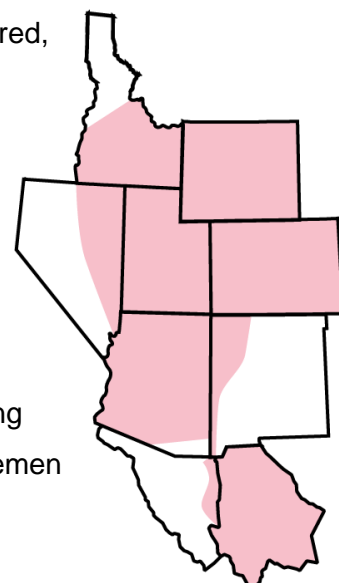
Hospital Overview

Shriners Hospitals for Children – Salt Lake City, is a charitable, Joint Commission accredited facility, dedicated to excellence in pediatric orthopaedic and reconstructive plastic care within our established scope. Our mission is to be leaders in optimizing the full potential of children by delivering state-of-the-art care for pediatric orthopaedic conditions and related needs; providing education for patients, family, and the health care team; and discovering, through research, new and updated knowledge that will improve the quality of care and life of children and families.

We render these services to patients within a compassionate, family centered, collaborative environment regardless of their ability to pay. Our primary catchment area includes Utah, Idaho, Colorado, Wyoming, Arizona, New Mexico, Nevada and parts of northern Mexico.

Patients may be received or transferred from other Shriners Hospitals, or states, when the patients are in need of the specialty surgeries performed at our Hospital. In 2018, Shriners Hospitals for Children – Salt Lake City served children from across the globe, providing care for patients originating from countries such as Bangladesh, Colombia, Guatemala, India, Peru, Yemen and Zambia.

We have a very generous charity policy that enables us to provide care for anyone regardless of their circumstances and in direct relationship to their specific needs. As one of only two pediatric hospitals in Utah, we exist to provide pediatric orthopaedic care for those who want to choose their provider and are



SHC-SLC Catchment Area

seeking quality care in an atmosphere that fosters close professional relationships with care givers. Shriners Hospitals for Children has been nationally recognized by Press Ganey Associates for excellence in patient satisfaction. Shriners Salt Lake City consistently ranks in the top decile among pediatric facilities with Press Ganey scores reported above 95 percent for inpatient/outpatient services and ambulatory surgery. (**Exhibit 1**)



Shriners Hospitals for Children — Salt Lake City is ranked 19th in pediatric orthopaedics in U.S. News & World Report's 2018-2019 rankings of children's hospitals in the United States. The Hospital shares this distinction with its community partner Primary Children's Hospital, and the 2018-2019 rankings mark the fourth consecutive year the hospitals have shared national recognition.

SHC - Salt Lake City is part of the Shriners Hospitals for Children health care system with locations in the U.S., Canada and Mexico. Our staff is dedicated to improving the lives of children by providing pediatric specialty care, conducting innovative research, and offering outstanding educational programs for medical professionals. The system was established by the Shriners International fraternal organization of North America. The first Shriners Hospital was opened in 1922 in Shreveport, Louisiana in an effort to serve children afflicted with debilitating orthopaedic conditions associated with polio. The orthopaedic Shrine Hospitals were among the first specialized pediatric orthopaedic hospitals in North America. Several locations also provide services for cleft lip and palate repair, pediatric burn care and spinal care cord rehabilitation.



Shriners Hospitals treat other complicated, specialized orthopaedic cases, such as osteogenesis imperfecta, spina bifida, cerebral palsy, scoliosis, hand problems, limb deficiencies and growth problems, club feet, dislocated hips, Legg-Perthes disease as well as orthopaedic problems resulting from other neuromuscular disorders and rare genetic conditions.

The top 10 diagnoses treated at SHC-SLC in 2018 included:

1. *Other specified congenital deformities of hip*
2. *Adolescent idiopathic scoliosis, thoracic region*
3. *Adolescent idiopathic scoliosis, thoracolumbar region*
4. *Pathological dislocation of left hip (not elsewhere classified)*
5. *Valgus deformity, left knee (not elsewhere classified)*
6. *Neuromuscular scoliosis, thoracic region*

7. *Neuromuscular scoliosis, thoracolumbar region*
8. *Contracture, left knee*
9. *Other specified acquired deformities of lower left leg*
10. *Pathological dislocation of right hip (not elsewhere classified)*

The top 10 procedures performed in 2018 included:

1. *Removal of implant; deep (eg, buried wire, pin, screw, metal band, nail, rod or plate)*
2. *Arrest, hemiepiphyseal, distal femur or proximal tibia or fibula (eg, genu varus or valgus)*
3. *Application of Risser jacket, localizer, body; only*
4. *Chemodenervation of one extremity; 1-4 muscle(s)*
5. *Gastocnemius recession (eg, Strayer procedure)*
6. *Application of short leg cast (belo knee to toes); walking or ambulatory type*
7. *Destruction by neurolytic agent; other peripheral nerve or branch*
8. *Arrest, epiphyseal, any method (eg, epephysiodesis); distal femur*
9. *Transfer or transplant of single tendon (with muscle redirection or rerouting); superficial (eg, anterior tibial extensors into midfoot*
10. *Ligamentous reconstruction (augmentation), knee; extra-articular*

Additionally, the top 10 2018 inpatient procedures included:

1. *Fusion of 8 or more thoracic vertebral joints with autologous tissue substitute, posterior approach, posterior column, open approach*
2. *Reposition of left upper femur with internal fixation devices, open approach*
3. *Reposition of right upper femur with internal fixation device, open approach*
4. *Insertion of internal fixation device into left lower femur, open approach*
5. *Release left hip tendon, open approach*
6. *Reposition left upper femur with intramedullary internal fixation device, open approach*
7. *Detachment at right foot, complete, open approach*
8. *Reposition right upper femur with intramedullary internal fixation device, open approach*
9. *Reposition left lower femur with internal fixation device, open approach*
10. *Revision of internal fixation device in lumbar vertebra, open approach*

The Salt Lake City Shriners hospital began as a leased unit at St. Mark's Hospital in Salt Lake City in 1925. The Shriners rented 25 beds from St. Mark's Hospital and began providing care to

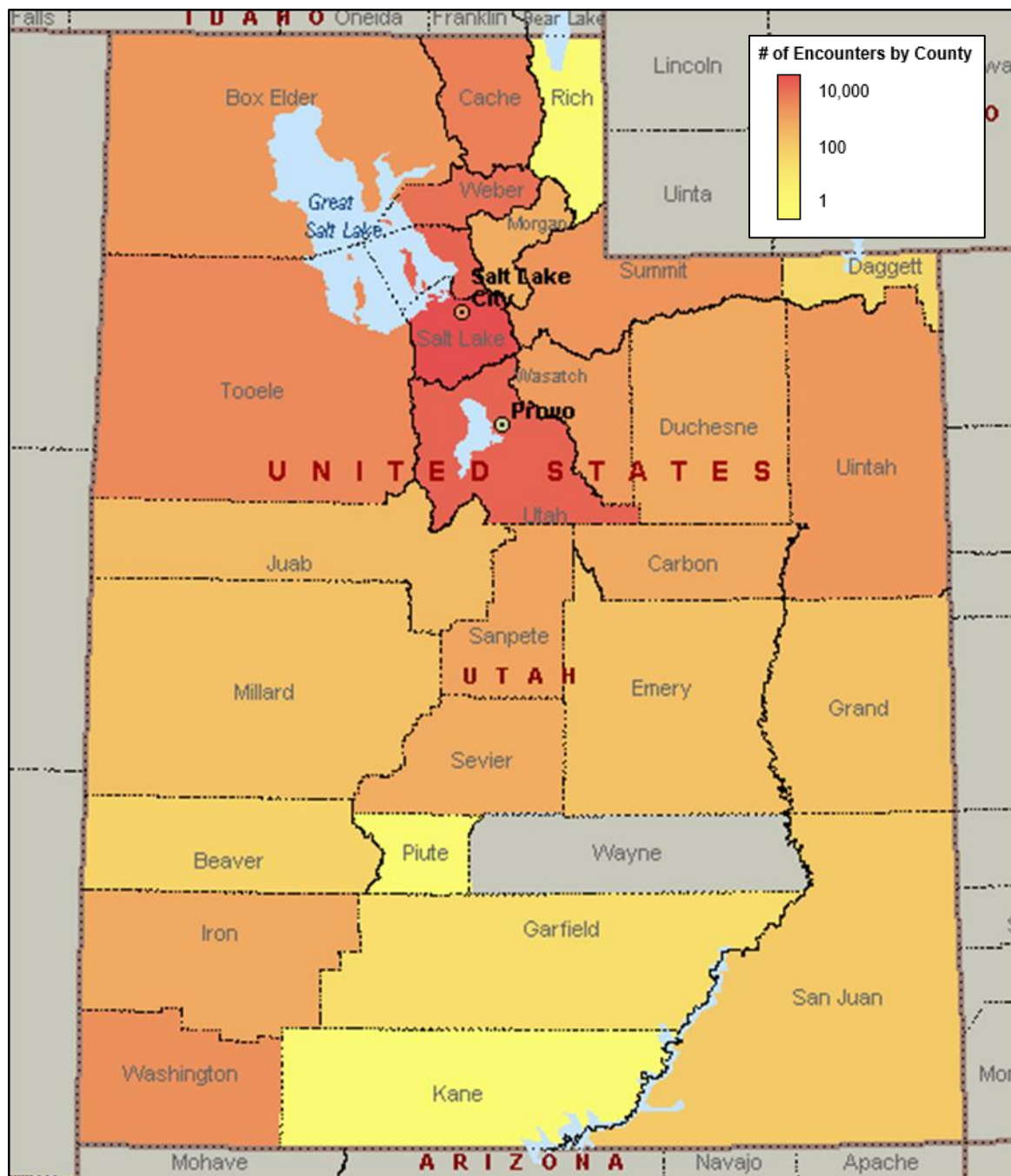


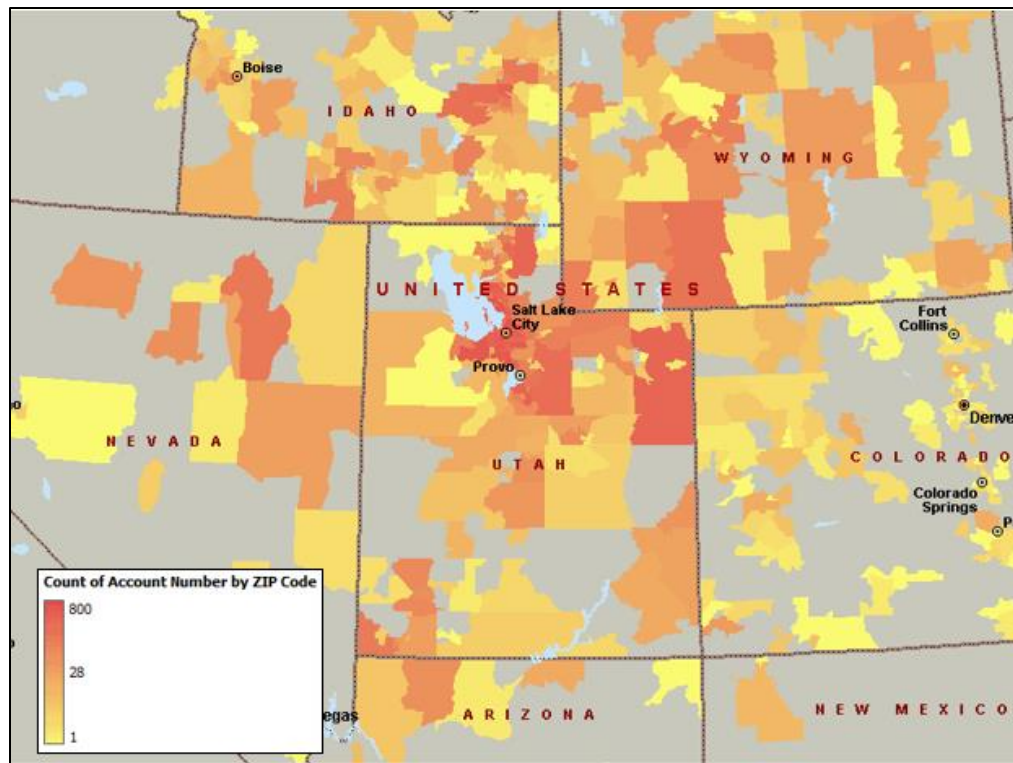
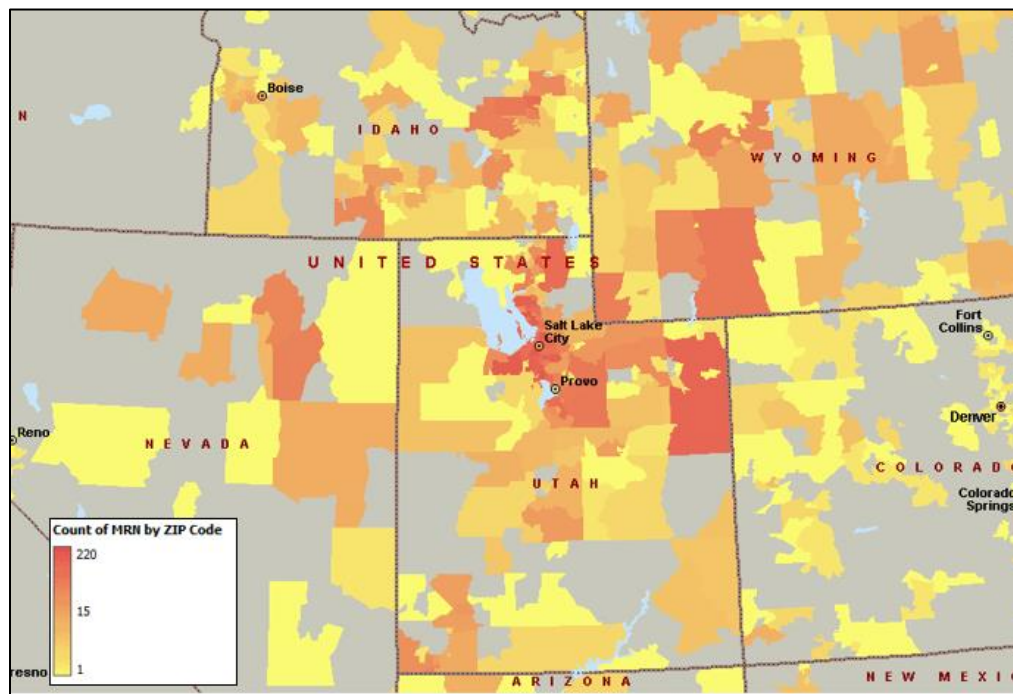
children who had been crippled with polio within the Intermountain area. In 1951 the unit was closed and the patients moved to a new building at 1275 East Fairfax Road in Salt Lake City. It is interesting to note that it took an Act of Congress to obtain the property on the current location in which the Salt Lake City hospital was built. With the assistance of United States President

Harry S. Truman, approximately eight acres of land was purchased from Fort Douglas via this Act of Congress.

Today, Shriners Salt Lake City has approximately 9,778 active patients (patients under the age of 21 who have had a clinical encounter 2016-2018). A significant percentage of these patients are seen on an outpatient basis with over 70% of patients residing in Utah and 80% residing in our catchment radius area of 189 miles.

SHC – Salt Lake City 2017 Heat Map – Number of Patients (*Utah*)



SHC – Salt Lake City 2017 Heat Map – Number of Encounters**SHC – Salt Lake City 2017 Heat Map – Number of Patients**

As defined by the Office of Management and Budget, a Core Based Statistical Area (CBSA) is U.S. geographic area, based around an urban center of at least 10,000 people and adjacent areas that are socioeconomically tied to the urban center by commuting.¹

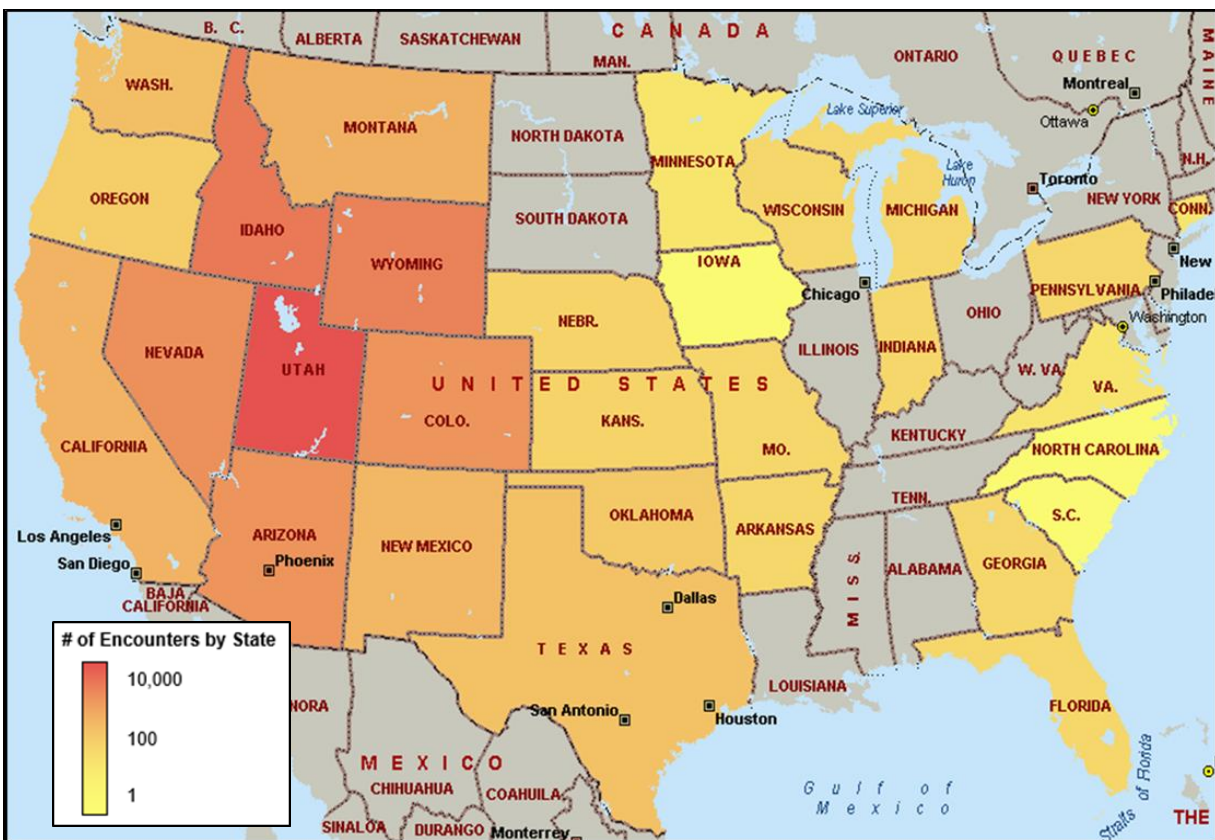
The CBSAs found within the 189 mile radius of SHC-Salt Lake City include:

- Blackfoot, ID *Micro*
- Burley, ID *Micro*
- Evanston, WY *Micro*
- Heber, UT *Micro*
- Logan, UT *Metro*
- Ogden, UT *Metro*
- Clearfield, UT *Metro*
- Pocatello, ID *Metro*
- Price, UT *Micro*
- Provo, UT *Metro*
- Orem, UT *Metro*
- Rock Springs, WY *Micro*
- Salt Lake City, UT *Metro*
- Summit Park, UT *Micro*
- Twin Falls, ID *Micro*
- Vernal, UT *Micro*



¹https://www.census.gov/geo/reference/gtc/gtc_cbsa.html

Throughout 2018 the Salt Lake City hospital provided care for 5,323 children from 17 countries and 30 states.



The large catchment area affiliated with Shriners Salt Lake City has led to the creation of Outreach Clinics in order to provide Shriners Hospitals for Children resources to children in Mexico (via El Paso, Texas); Phoenix, Arizona and Denver, Colorado. In addition, a growing list of telehealth sites now include, Idaho Falls, Idaho; Rock Springs, Wyoming and Elko, Nevada. Members from Shrine centers supporting the Salt Lake City hospital also frequently sponsor rural area screening clinics to further identify potential orthopaedic patients in need of our services. As a system, Shriners Hospitals for Children is striving to treat more kids in more places than ever before.

Process and Methods

Establishing the Infrastructure for the Assessment

This is the third Community Health Needs Assessment performed by our hospital. Much like our first two assessments, we chose to take an individual approach to the assessment vs. a community partner approach, as we are one of only two pediatric hospitals in the state of Utah.

Another major consideration was whether to have an assessment advisory committee. We decided against that for two primary reasons: 1) Significant community health needs assessments have already been completed by the Utah Department of Health and the Salt Lake County Health Department (which represents almost half of the population of Utah). 2) We have a robust database of pediatricians, primary care physicians, pediatric care coordinators and office managers which we utilized to disseminate a 9 question survey to:

- Paper copies of the survey were mailed to our top 100 referring physicians throughout the month of June, 2018
- Surveys were also distributed to 224 pediatric care managers, clinic managers and referral coordinators affiliated with our catchment area

"As one of our valued community health partners, we are asking you to complete this brief 9 question survey to help us understand your satisfaction with our services and patient referral process. Your answers will help us identify how we can best serve our communities and improve our relationships with community health leaders like you."

Stakeholders and Target Populations

Because we are a pediatric orthopaedic specialty hospital our physician stakeholders include our pediatric orthopaedic surgeons, anesthesiologists, pediatricians, nurse practitioners, and physician assistants who work at the hospital along with the network of pediatricians and primary care physicians that refer patients to us. Certainly our owners, the Shriners, who send patients to our facility, are also stakeholders, as well as the rest of our hospital staff who either deliver care or are involved in supportive roles.

Over the past several years, our patient referrals from Utah have increased from 35% - 45% to over 70% based on the implementation of a physician liaison program that was developed in 2011. Hence our primary target population is the citizens of Utah and our secondary target population is the remainder of our catchment area, which includes the citizens of Idaho,

Colorado, Wyoming, New Mexico, Arizona, and Nevada. Our primary and secondary populations are naturally a subset of the Shriners Hospitals for Children community, which, for the purposes of this assessment, includes the entire United States of America, Mexico and Canada.

Data Collection

Data collection came from the following sources:

1. Utah Department of Health
2. United States Census Bureau²
3. Public Health Indicator Based Information Systems (IBIS)³
4. Healthy Salt Lake Community Health Data⁴
5. Community survey mailed to 100 primary care providers; 92 pediatric clinic managers; 132 pediatric case managers (**Exhibit 2**)

We also conducted interviews, solicited input and participated in meetings and community events with the following municipal partners and organizations who represent the broad interests of the community served by the hospital:

- Association for Utah Community Health (AUCH)

The Association for Utah Community Health is the primary care association for the state of Utah. AUCH members include Federally Qualified Health Centers (FQHC) and other providers who strive to meet the needs of the medically underserved. AUCH and its member organizations are part of a statewide and national movement to reduce barriers to health care by enhancing primary care service delivery through prevention, health promotion, and community participation.

**SHC-SLC is a sponsor and participant at the annual AUCH Primary Care Conference*

- Children with Special Health Care Needs (CSHN), Utah Department of Health

The mission of CSHCN is to improve the health and quality of life for children with special health care needs, and their families, through early screening and detection, data integration, care coordination, education, intervention, and life transitions.

** SHC-SLC is a participating member of UDHs Utah Healthy Teens Coalition*

² <https://www.census.gov/>

³ Utah Department of Health, Public Health Indicator Based Information Systems (IBIS). <https://ibis.health.utah.gov/>. Accessed March 4, 2019.

⁴ <http://www.healthysaltlake.org/>

- Utah School Nurses Association (USNA)

The mission of USNA is to optimize student health and learning by advancing the practice of school nursing in the state of Utah.

**SHC-SLC actively participates in USNA annual conferences*

- Area Health Education Centers of Utah (AHEC)

The goal of the Utah Area Health Education Center is to provide access to primary healthcare for Utah's entire population.

**SHC-SLC is a participating sponsor at the annual Utah Primary Care Summit*

- Healthy Salt Lake – community partnership led by the Salt Lake County Health Department

Healthy Salt Lake is a community partnership led by the Salt Lake County Health Department. Its mission is to support collaborative efforts that bring together all stakeholders committed to advancing health and wellness for individuals, families, communities, and the environment in Salt Lake County.

**SHC-SLC Business Development Director participated in the Healthy Salt Lake Steering Committee meeting January 9th, 2019*

- Utah Childrens' Care Coordination Network (UCCCN)

UCCCN provides resources, tools, expert advice, and peer learning and support for pediatric and family practice staff members who help coordinate the care of patients.

**Members of SHC-SLC's Business Development team attend UCCCN's monthly meetings*



Key Findings

Socio-Demographic Context

With close to 30% percent of its population under the age of 18, Utah continues to lead the nation with the youngest state population. In 2017 Utah continued to report the highest birth rate in the U.S. with 48,578 live births or 15.7 per 1,000 total population. This is a 5% decrease from the 2016 birth rate of 16.6, and ultimately, the lowest birth rate in a decade. While Utah's birth rate has declined each year since 2007, it continues to far outstrip the 2017 national average of 11.8 births per thousand population.

Area demographics speak strongly to future demand for healthcare services. According to 2018 U.S. Census data, compared to the U.S., Utah is characterized by:

- a higher percentage change in population growth
- a higher percentage of persons under 18 years of age
- a lower number of persons 65 years and over
- a higher high school graduation rate
- a larger percentage of persons holding a bachelor's degree or higher
- a lower percentage of all persons in poverty
- a similar percentage of persons without health insurance

July 2018 US Census Quick Facts⁵	US	Utah
Population percentage change	6%	14.4%
Persons under 18 years	22.6%	29.9%
Persons 65 years and over	15.6%	10.8%
High school graduate or higher, percent of persons age 25 years +	87.3%	91.8%
Bachelor's degree or higher, percent of persons age 25 years +	30.9%	32.5%
Persons in poverty, percent	12.3%	9.7%
Persons without health insurance, under age 65 years, percent	10.2%	10.1%

Additionally, an estimated 6.3% of Utah children aged 0-18 lacked health insurance coverage in 2017.⁶

⁵ United States Census, <http://quickfacts.census.gov>; <https://www.census.gov/quickfacts/fact/table/US/PST045218> ; <https://www.census.gov/quickfacts/ut> ; revised July 1st, 2018.

⁶ <https://ibis.health.utah.gov/indicator/view/MedCHIPPen.CHIPElig.html>

Utah Population Growth

Utah's current population figures makes it the 34th most populous state in the country.⁷ By the time of the next census in 2020, figures should have comfortably exceeded three million. Utah's St. George is currently one of the fastest-growing metropolitan areas in the country, and the state as a whole has the 4th highest growth rate at 1.64%. According to the Census Bureau, Utah's minority population is growing the fastest and quickly gaining on the white population as well.

According to projections, Utah's rapid growth is expected to continue over the next few decades, and by 2060, the state should have a population of 6.84 million people. It's believed the state's fast growth is partially due to the quality of life and the strong economy, as the state and many of its cities are frequently rated as some of the best places to live in the whole country.

Childhood Poverty in Utah

Poverty in the early years of a child's life, more than at any other time, has especially harmful effects on continuing healthy development and well-being, including developmental delays and infant mortality. Well-being in later childhood, such as teen pregnancy, substance abuse, and educational attainment, is also influenced by early childhood poverty. According to the American Community Survey (ACS), an estimated 10.7% of Utah children aged 17 or under (approximately 97,832 Utah children) were living in poverty in 2017. Children born into poverty are less likely to have regular health care, proper nutrition, and opportunities for mental stimulation and enrichment. Utah has a lower percentage of children in poverty than the U.S. as a whole; 10.7% vs. 18.4% in 2017.⁸

Healthy Beginnings

Women who receive early and consistent prenatal care increase their likelihood of giving birth to a healthy child and health care providers recommend that care begin in the first trimester of pregnancy.⁹ The National Center for Health Statistics began reporting U.S. rates of first trimester prenatal care in 2016. Among women giving birth in the U.S. in 2016, 77.1% began prenatal care in the first trimester of pregnancy, compared to 75.3% in Utah.

⁷ <http://worldpopulationreview.com/states/utah-population/>

⁸ <https://ibis.health.utah.gov/indicator/view/ChldPov.html>

⁹ https://ibis.health.utah.gov/indicator/view/PNC.Ut_US.html

Additionally, significant disparities exist among other Utah racial/ethnic groups, especially Native Hawaiians/Pacific Islanders (43.3%), American Indians/Alaska Natives (61.5%), and Blacks/African Americans (60%). Data collected in 2017 also shows the following population subgroups are less likely to enter prenatal care in their first trimester:

- *Mothers younger than 20, especially teens*
- *Non-White Race*
- *Hispanic ethnicity*
- *Low educational attainment (high school or less)*
- *Unmarried women*
- *Women who have had three or more previous births*

Utah's low birth weight percentage has increased over the last decade from 6.7% in 2007 to 7.2% in 2017. Utah's low birth weight rate is lower than the national rate of 8.2%.¹⁰

Survey Results

Survey responses from pediatric and primary care physicians and pediatric care coordinators from around the state of Utah indicate the following:

When asked why they refer children to Shriners Hospitals for Children – Salt Lake City, the majority of respondents answered with *orthopaedic expertise*, followed by *past experience referring there and excellent reputation*. (Figure1)

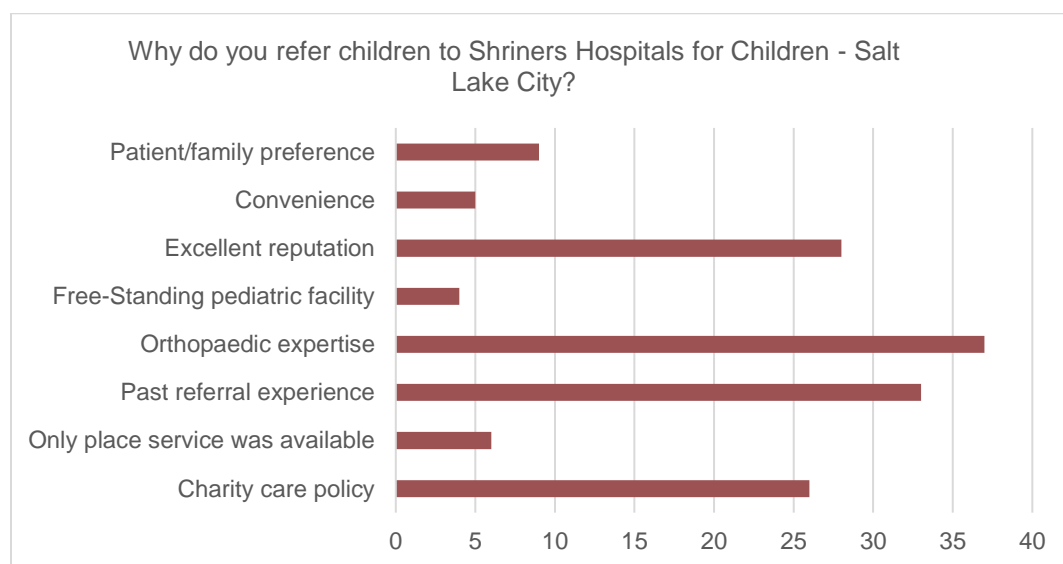


Figure 1

¹⁰ https://ibis.health.utah.gov/indicator/view/LBW.Ut_USYear.html

When asked about for what specialty conditions and services most often referred to Shriners Hospitals for Children – Salt Lake City the most common response was *scoliosis and spinal abnormalities* followed by *hip disorders*, *clubfoot* and *prosthetics and orthotics*. The number of responses are categorized by service lines referenced in the charts below. (Figures 2-5)

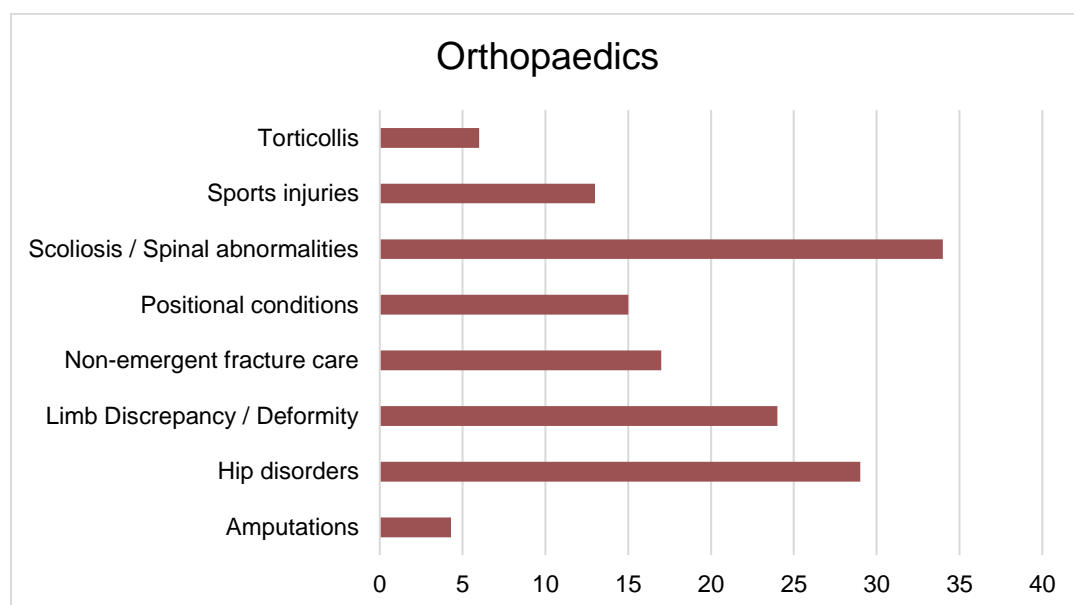


Figure 2

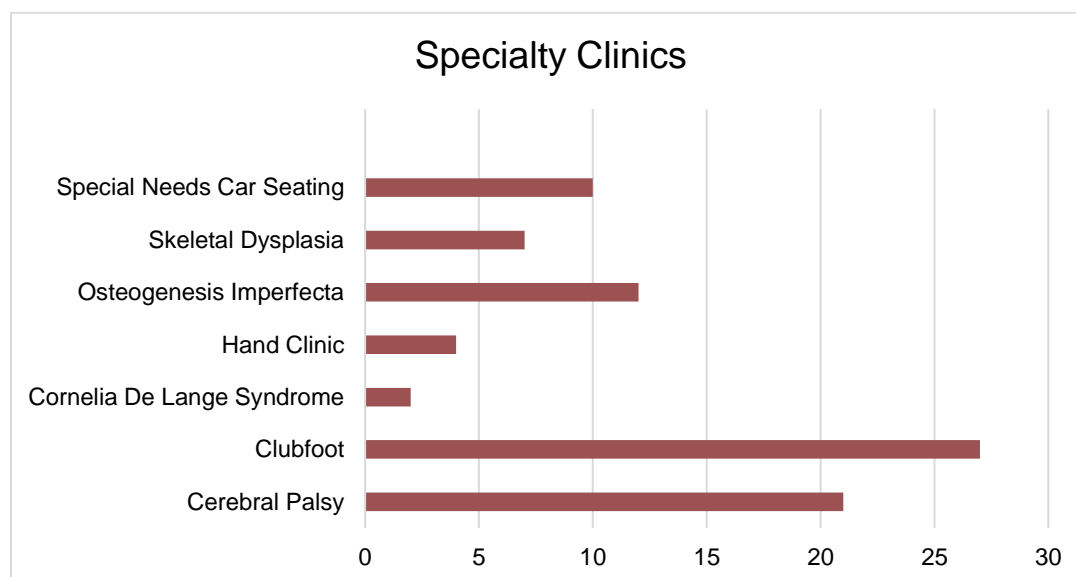
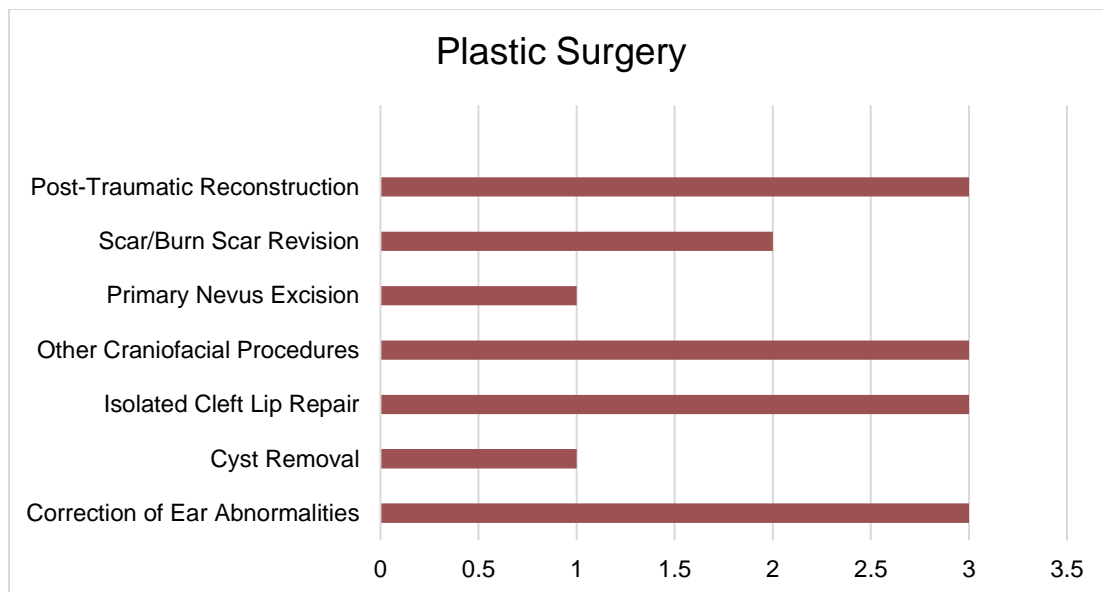
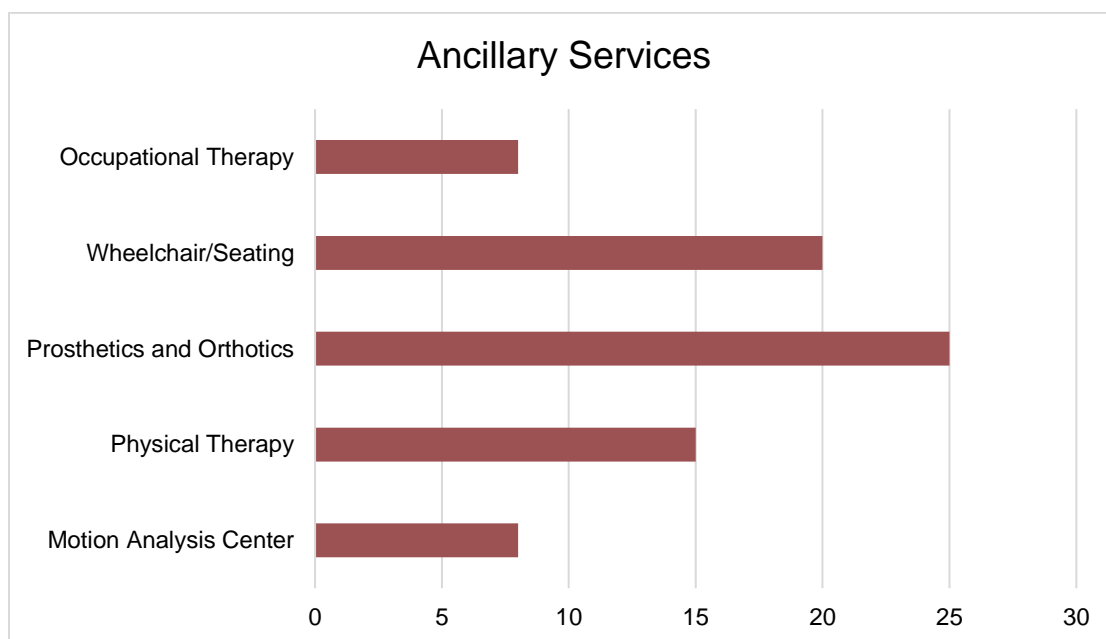


Figure 3

**Figure 4****Figure 5**

When asked what concerns you most about pediatric healthcare in Utah, responses centered on lack of pediatric mental health services, insurance coverage, and access to pediatric subspecialists. (**Exhibit 3**)

Interviews with community health partners (UCCCN and AHEC) also revealed a common concern of lack of pediatric specialty care and a greater need for pediatric mental health services.

Overall, this market/environmental assessment validates the need for the services and capabilities provided by Shriners Hospitals for Children – Salt Lake City, as what we have to offer is very multifactorial when it comes to being dedicated to caring for and improving the lives of children.



Our criterion for evaluating the data was simple. We want to understand the general demographics of the population and the economic and social influences that affect the utilization of healthcare, particularly in our primary population market.

Health Priority Needs & Action Plans

2015 CHNA Summary of Action Items and Outcomes

The following items of concern were identified in the 2015 CHNA:

- Psychiatry and mental health support
- Access to care for uninsured/underinsured
- Lack of services for many subspecialists
- Lack of specialists in rural areas

Action items and outcomes from the preceding CHNA are identified below:

Psychiatry and Mental Health Support

Action Item:

Maintain annual efforts to support the Shriners Hospitals for Children national bullying awareness and prevention campaign highlighted each October in conjunction with National Bullying Prevention month.

Outcome:

SHC-SLC continues to support the national anti-bullying campaign and recently partnered with the National Communication Association (NCA) to host an Anti-Bullying conference on November 6th, 2018. Conference content focused on bullying prevention tools for educators and parents.

Additionally, from May 2016 to December 2018, Shriners Salt Lake City administered 9,485 PROMIS (*Patient-Reported Outcomes Measurement Information System*) packets to 5,034 children admitted for outpatient surgical treatment and outpatient clinics. Social workers and the outcomes coordinator worked closely together to respond to children with a severe *Peer Relationships* score by initiating a social work encounter to identify support needs. In 2018, a quality improvement initiative analyzing peer relationship scores and social work needs resulted in a change to hospital procedure by expanding the PROMIS threshold for social work intervention in clinic.

Access to Care for Uninsured/Underinsured

Action Item:

Over the next three years, SHC-SLC will collaborate with our local FQHCs (Federally Qualified Health Centers) to provide healthcare reference materials for uninsured families.

Outcome:

SHC-SLC sponsored the Association for Utah Community Health (AUCH) 2017 and 2018 conference which provided direct access to FQHC administrators and staff and assisted in facilitating dissemination of reference materials to the uninsured patient populations they serve. Many FQHCs in our catchment area serve Spanish speaking populations. SHC-SLC's quarterly publication, "Leaders in Care," was translated to Spanish and placed with other Spanish speaking materials (patient referral forms and hospital fact sheets) in several FQHC patient waiting areas.

Lack of Services for Many Subspecialists (Gastroenterology & Neurology)

Action Item:

Increase neuromuscular clinic offerings and pursue contracts with local gastroenterologists to help provide services for patients attending our multi-disciplinary clinics.

Outcome:

SHC-SLC has increased the number of multi-disciplinary clinic offerings to keep up with the growing patient population in need of neurological support (neurological deficits and bone disorders often lead to locomotor system abnormalities¹¹). The Salt Lake City hospital offers Neuromuscular, cerebral palsy, skeletal dysplasia and Cornelia de Lange Syndrome clinics multiple times each year with a pediatric neurologist in attendance at each clinic. Additionally, a gastroenterologist is present at the Cornelia de Lange Syndrome clinic held each year in March.

¹¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2117631/>

Lack of Specialists in Rural Areas

Action Item:

Over the next three years, SHC-SLC will collaborate with the following 3 Utah AHEC centers by providing educational offerings and health related community advocacy opportunities to health care professionals serving rural areas of the state:

- Northern Utah AHEC at Weber State University in Ogden, Weber County
- Crossroads AHEC at Salt Lake Community College in West Jordan, Salt Lake County
- Southern Utah AHEC at Southern Utah University's Center for Rural Health, Iron County

Outcome:

SHC-SLC partnered with Utah AHEC and together formed a Rural Health Scholars (RHS) Shriners Ambassador program to assist in providing pediatric orthopaedic education and support to rural healthcare professionals. The RHS program, in affiliation with the Utah Center for Rural Health, *"prepares students for admission to graduate healthcare programs.*

*Through a series of academic and non-academic experiences, students increase their likelihood of being accepted into medical, dental, physical therapist, occupational therapist, physician assistant, nursing, podiatry, optometry, veterinary, healthcare administration and allied health schools".*¹²

Hospital Business Development staff members, along with our Board Chairman have conducted multiple educational presentations to several groups of RHS students affiliated with Southern Utah University and Salt Lake Community College. Once RHS students are educated on the service line offerings available at Shriners Hospitals for Children, they are encouraged to make connections with rural community leaders, informing them of the pediatric orthopaedic care provided by SHC-SLC.

In addition to fostering the RHS program, members of the SHC-SLC Pediatric Orthotics and Prosthetic Services department have participated in regional AHEC job fairs to educate students on prosthetic and orthotic related professions. The Hospital is also a participating annual sponsor at the Utah AHEC Primary Care Summit; a one day event which brings together local healthcare agencies and other community stakeholders to discuss primary care solutions to Utah's priority health concerns.

¹² <https://www.suu.edu/ahec/rural-scholars.html>

2018 Health Priority Needs

Feedback from our local surveys and community partner interviews revealed the following areas of demand and concern:

- Pediatric mental health support
- Access to pediatric specialties
- Insurance coverage inequity / affordability

While pediatric mental health support falls outside of the scope of pediatric orthopaedic services offered by Shriners Hospitals for Children – Salt Lake City, hospital leadership has identified opportunities in these areas where SHC-SLC can make a broad impact with our patients and members of the community.

Action Item – Pediatric Mental Health Support

According to the Utah Department of Health's 2018 Adolescent Health Trends report, Utah's adolescent mental health indicators significantly increased from 2013 to 2017. Adolescents who reported feeling sad or hopeless almost every day for two weeks increased from 20.8% in 2013 to 27.3% in 2017 and suicide ideation increased from 14.1% to 18.1%. Making a suicide plan increased from 10.8% to 19.3%, and adolescents reporting one or more suicide attempts increased from 6.2% to 7.7%.¹³

Another major area of concern is bullying, which can have lasting effects on mental health. Studies concerning childhood bullying suggest that children with disabilities are often the target of harassment.¹⁴

While mental health counseling and services are not currently offered by the Salt Lake City hospital, we do have staff in place to address the social and behavioral issues often affecting children with special health care needs. As previously referenced, in 2016 the Hospital implemented PROMIS (*Patient-Reported Outcomes Measurement Information System*) to assist in identifying children in need of social work intervention. Peer relationship scores captured by

¹³ https://ibis.health.utah.gov/pdf/opha/publication/hsu/2018/1810_Adolescent.pdf

¹⁴ <https://www.cerebralpalsyguidance.com/cerebral-palsy/living/bullying/>

PROMIS provide indicators relevant to levels of happiness and possible bullying. Social work staff is notified when scores of ≤ 29.99 are achieved and when a child over the age of 10 completes a self-assessment with a score of 30-34.99. Social workers then meet with families in clinic or follow-up by phone to discuss peer relationship issues.

In addition, our Child Life department is staffed with licensed therapists to assist families with coping mechanisms in preparing for the surgical experience and hospital stay. They provide and teach non-pharmacological techniques for pain management and support during minimally invasive, nonsurgical procedures.

Our Recreation Therapy department hosts a variety of therapeutic activities which are available to patients such as adapted sports, crafts, play sessions, music therapy and entertainment while at the hospital. Outpatients can participate in hospital sponsored sporting leagues, horseback therapy and mini-camps. The Hospital also partners with the National Abilities Center in Utah to host a week long ski and snowboard camp, as well as provides a summer rafting trip (*Unlimbited Camp*) for teen amputees. In 2018, Over 60 patients with amputations benefited from camps which focus on supporting and improving outcomes of comfort level with their amputation and peer interactions in a therapeutic setting.



Given the overwhelming community need surrounding pediatric mental health, the Hospital has identified the following opportunities to be addressed over the next three years:

- Continue to maintain annual efforts to support the Shriners Hospitals for Children national bullying awareness and prevention campaign highlighted each October in conjunction with National Bullying Prevention month.
- Continue with PROMIS studies to identify children in need of social work intervention and explore the addition of CP-Pro to evaluate children with cerebral palsy.

Action Item – Access to Pediatric Specialties

As with our previous CHNA, 2018 findings suggest concerns related to accessibility to pediatric subspecialists. According to the Children's Hospitals Association, hospitals across the country continue to experience significant shortages in pediatric specialties which affect children and their families' ability to receive timely and appropriate care.¹⁵

While Shriners Hospitals for Children – Salt Lake City has a narrow focus in serving pediatric orthopaedic needs, the Hospital has increased the number of multi-disciplinary/specialty clinic offerings which now include:

- **Neuromuscular Clinic** – A monthly multi-disciplinary clinic serving patients with conditions associated with muscular dystrophy. Orthopaedics, developmental pediatrics, neurology, dietary, PT, OT, seating, genetic counseling, orthotics, social work and care management are each represented to assess and evaluate patients.
- **Cerebral Palsy Clinic** – Held on the second and third Monday (p.m.) of each month. Orthopaedics, neurology, physical medicine and rehabilitation, social work and nutrition are represented to assess and evaluate patients. Access to wheel chair, orthotics and therapy services (PT, OT, speech, seating) are available as needed.
- **Osteogenesis Imperfecta Clinic** – A quarterly, multi-disciplinary clinic serving patients with Brittle Bone Disease. Dental screening, orthopaedics, spine, social work, care management, nutrition, genetics consultation, and developmental pediatrics are each represented to assess and evaluate patients. Access to therapy services (PT, OT, speech) are available as needed.
- **Hand Clinic** – Held two times each month. A hand orthopaedist and occupational therapist are available to assess and evaluate patients.
- **Skeletal Dysplasia Clinic** – Held three times a year on the second Wednesday in June, September and December. Orthopaedics, neurology, neurosurgery, ENT, genetics, social work, PT, OT, dental and nutrition are represented at this clinic.
- **Cornelia de Lange Syndrome Clinic** – Orthopaedics, developmental pediatrics, neurology, gastroenterology, ENT, genetics, social work, PT, OT, dental and nutrition are represented at this annual clinic held in March.

¹⁵ <https://www.childrenshospitals.org/Issues-and-Advocacy/Graduate-Medical-Education/Fact-Sheets/2018/Pediatric-Workforce-Shortages-Persist>

- **Utah Clubfoot Clinic** – Weekly clinics at two locations are available to treat patients using the Ponseti serial casting method; the worldwide gold standard for the treatment of clubfoot. Orthotics staff is available to help with any bracing needs and child life services assist with patient care.

This unique and personalized approach to patient care provides a one-stop shop for patients with complex medical issues; offering appointments with multiple pediatric sub-specialists, all in one place on one day.

To further enhance access to pediatric sub-specialists, Shriners Hospitals for Children – Salt Lake City is growing its telehealth program to serve the orthopaedic needs of children in rural areas identified in the Hospital's catchment area. Current sites include Rock Springs, Idaho Falls, and Elko with plans to expand into additional areas of Nevada and Arizona.

Over the next three years, Shriners Hospitals for Children – Salt Lake City will seek new opportunities to partner with neighboring health agencies to enhance outreach efforts.

Action Item – Insurance Coverage

Based on our communication with patients and families, we have found that many uninsured parents lack awareness of the types of health care plans available to them and their children. Shriners Hospitals for Children – Salt Lake City is committed to helping uninsured families qualify for health care coverage under current ACA guidelines through our financial counseling services available to each new patient.

The mission of Shriners Hospitals for Children – Salt Lake City has always been carried out regardless of the ability of a patient or family to pay for the services provided. We are fortunate that we continue to be funded by our national endowment fund along with donations from private donors, foundations and third party fund raising efforts. Access to care at SHC-SLC for the uninsured/underinsured is provided through the following programs:

- Shriners Hospitals for Children Charity Care is a type of financial assistance available to SHC patients and their families when the family earns less than 400% of the United States

Federal Poverty Level. Charity Care is an adjustment code eliminating amounts owed for patient care, and is not a cash form of assistance.

- Shrine Assistance, is a type of financial assistance available to SHC patients and their families instead of, or in addition to, Charity Care. Shrine Assistance is an adjustment code reducing or eliminating amounts owed for patient care, and is not a form of cash assistance.

Shriners Hospitals for Children has implemented standards and requirements to identify and approve medically and/or financially needy patients who do not meet the Charity Care guidelines and/or are not eligible for public assistance or grant programs. Care or patient balances that cannot be classified as Charity Care will be considered under the Shrine Assistance guidelines, upholding the philanthropic mission of the Shriners Hospitals for Children.¹⁶

To supplement our financial counseling services and increase access to low-income/underserved patients, SHC-SLC will continue to partner with local FQHCs, community and public health centers to raise awareness about other health care services available outside of our orthopaedic service line offerings.



¹⁶ Shriners Hospitals for Children. Financial Assistance Policy. <http://www.shrinershospitalsforchildren.org/Financial%20Assistance>

Additional Need Areas

Improving the Lives of Children with Special Healthcare Needs

Shriners Hospitals for Children – Salt Lake City has served our community for over 90 years. As a leader in specialty orthopaedic care, we have identified an ongoing need to support children with special healthcare needs. In addition to the many treatment services available to our patients, SHC-SLC provides several valuable opportunities for children with special needs to participate in programs, events and activities that promote life skill development or improved quality of life.

- **Day Camps:** Various day camps are held throughout the year for children with Cerebral Palsy, Spina Bifida, Hemiplegia, and Down syndrome and are staffed with a recreational and physical therapist. One camp example includes a weekly Tae-kwon-do classes implemented in 2018 for kids with hemiplegia to support gross motor skills and emphasis on play and social interaction.
- **Playground:** Recreational Therapy staff members have been actively involved in the design and planning for a 2019 remodel of SHC-SLC's outdoor playground, which will be used as an area to provide therapy services. Installation of adaptive playground equipment will benefit the hospitals' special needs patient population.
- **Equipment Loaner Program:** This program provides gently used and/or refurbished equipment such as walkers, bath chairs, commodes, and wheelchairs. Throughout 2018, the program afforded provision of 61 pieces of equipment, offsetting \$11,000 of new equipment costs to families.
- **Special Needs Car Seat Clinic:** Clinics are held 2 times monthly to support safe car seat installation and use for special needs population. Specialty trained and certified car seat staff and a pediatrician are on hand to assess the needs of each patient. Families are educated on proper car seat usage specific to medical needs and each seat is custom fit to ensure proper vehicle installation.

- **Wheel Chair Seating and Mobility:** SHC-SLC wheelchair-seating staff continued efforts to create new and innovative mobility options for patients. Recent work has included creation of the innovative “powered Bumbo” (see photo). Intellectual property rights have been obtained and plans are in place to conduct research to determine if children as young as 18 months can be successful in using power mobility.



- **Adaptive Bike Program:** The Hospital has a robust adaptive bike program which provides biking access to children with disabilities. In 2018 adaptive bikes were provided to 75 children.



- **Pediatric Orthothotics and Prosthetic Services (POPS):** The Salt Lake City Shriners Hospital has a team of certified prosthetists, orthotists and specially trained technicians who manufacture and fit custom-designed braces and artificial limbs. The POPS team treated over 5,700 patients in 2018; creating 4,100 orthotic devices and 230 prosthetic limbs. Each device is personalized with the patient choosing their favorite colors and patterns during the fabrication process. This customized approach to care gives each child ownership of their device; boosting self-confidence and assisting with patient compliance.

Therapy Services Elevate Independence and Quality of Life

Shriners Hospitals for Children – Salt Lake City is designed with convenience in mind, offering a wide range of inpatient and outpatient services under one roof. Our therapy services are an important component of care, helping children improve their level of function to optimize their independence. Therapy services are conducted with a family-centered care approach in which family involvement is highly encouraged. Each child's program is designed for his or her individual needs and abilities with fun, play and creativity incorporated into every treatment plan.



Therapy services offered at Salt Lake City Shriners Hospital include physical, occupational, speech and recreation therapy.

- **Physical therapy:** Our physical therapy department provides evidence-based care to improve mobility and increase independence in the home and community. Skilled therapists evaluate mobility, strength, balance, gait and endurance to assess how a child is functioning in their environment. This information is then combined with patient and family goals to develop an appropriate treatment plan which often incorporates exercise plans, walking and adaptive activities, and training to use an assistive device, brace or prosthesis.
- **Occupational therapy:** The occupational therapy program aims to promote greater independence in functional activities of daily living, such as bathing, grooming, eating, dressing and handwriting. Our therapists evaluate arm and hand function, sensory processing and play skills to help children improve physical and emotional health as it relates to their environment.
- **Speech therapy:** Speech-language pathology services are provided to improve communication and swallowing skills. Speech conditions commonly treated include developmental apraxia of speech, dysarthria and cleft palate. Patients are evaluated on comprehension of language, expressive communication, speech and swallowing to determine appropriate treatment plans.
- **Recreation therapy:** Recreation therapy is designed to promote an active and healthy lifestyle, while increasing the quality of life thorough outdoor adventure, creative movement, sports, art and social engagement. Our recreation therapists provide leisure education that is age and developmentally appropriate and work with children in both individual and group settings to build these new skills.



Motion Analysis Studies Optimize Care

Shriners Hospitals for Children — Salt Lake City is a pioneer in motion analysis technology and was among the first motion/gait centers in the nation. Established in 1996, our motion analysis program is 20 years strong. We are one of only 10 accredited clinical motion analysis centers in the United States and continue to be a leader in the field through research initiatives designed to improve motion analysis methods and explore the orthopaedic treatments offered.

Cameras around the room track markers on the patient while he or she walks. This data is then run through a 3-D model in a computer to report movements and forces occurring in the body. Our specialists then use the data to strategically plan treatments and determine whether or not surgery is necessary. The data also provides a baseline from which we can compare future motion/gait results over time to determine whether the child is staying the same, improving or declining, to help determine treatment options.

Experienced professionals run the motion analysis center, including two orthopaedic surgeons, a Ph.D. biomechanical engineer, two physical therapists with doctorates in physical therapy and a coordinator. Since its inception, the Salt Lake City gait lab has conducted close to 8,000 studies.



Collaborative Approach to Orthopaedic Care

Shriners Hospitals for Children — Salt Lake City is a place where hope and healing come together. Through our innovative care, we instill confidence and teach our patients there are no limits to what they can do. Our patients and their families benefit from the expertise of our multidisciplinary team and their dedication to serving your needs. Our hospital staff helps ensure patients receive an optimal outcome by providing all aspects of inpatient and outpatient orthopaedic care, including surgery, nursing services, therapy, treatment and care management, in a family-centered environment. Every member of our exemplary medical staff, as well as our multidisciplinary professional team, is dedicated to helping children achieve their best quality of life and committed to improving the lives of children in the Intermountain West and beyond.



Acknowledgements

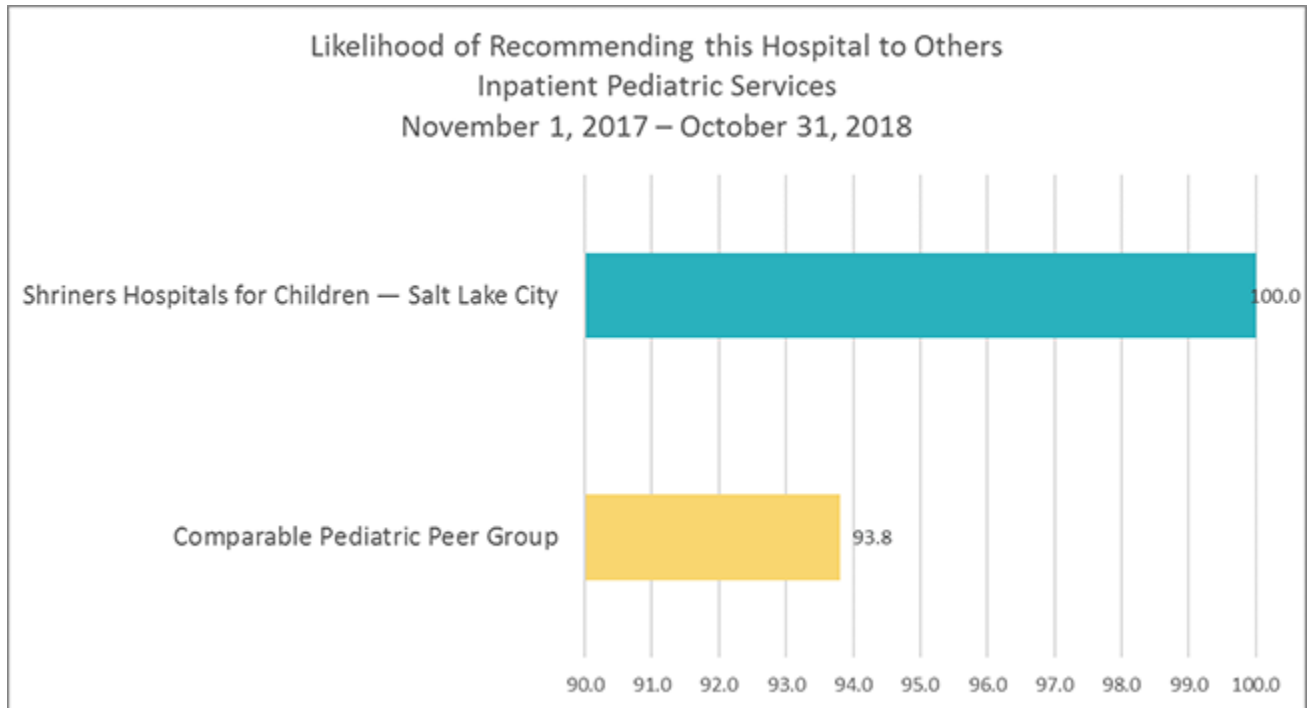
Data collection came from the following sources:

1. Utah Children's Care Coordination Network (UCCCN)
2. Association for Utah Community Health (AUCH)
3. Utah School Nurses Association (USNA)
4. Utah Department of Health, Children with Special Health Care Needs program (CSHCN)
5. Utah Department of Health, Public Health Indicator Based Information Systems (IBIS)
6. Utah Department of Health, Healthy Teens Coalition
7. Utah Area Health Education Centers (AHEC)
8. Salt Lake County Health Department, Healthy Salt Lake Coalition community health data
9. Utah Department of Health, Office of Public Health Assessment
10. United States Census, 2018 Quick Facts
11. Survey data collection compiled by hospital intern, Nate Hill
12. Community survey mailed to 100 primary care providers; 92 pediatric clinic managers; 132 pediatric case managers

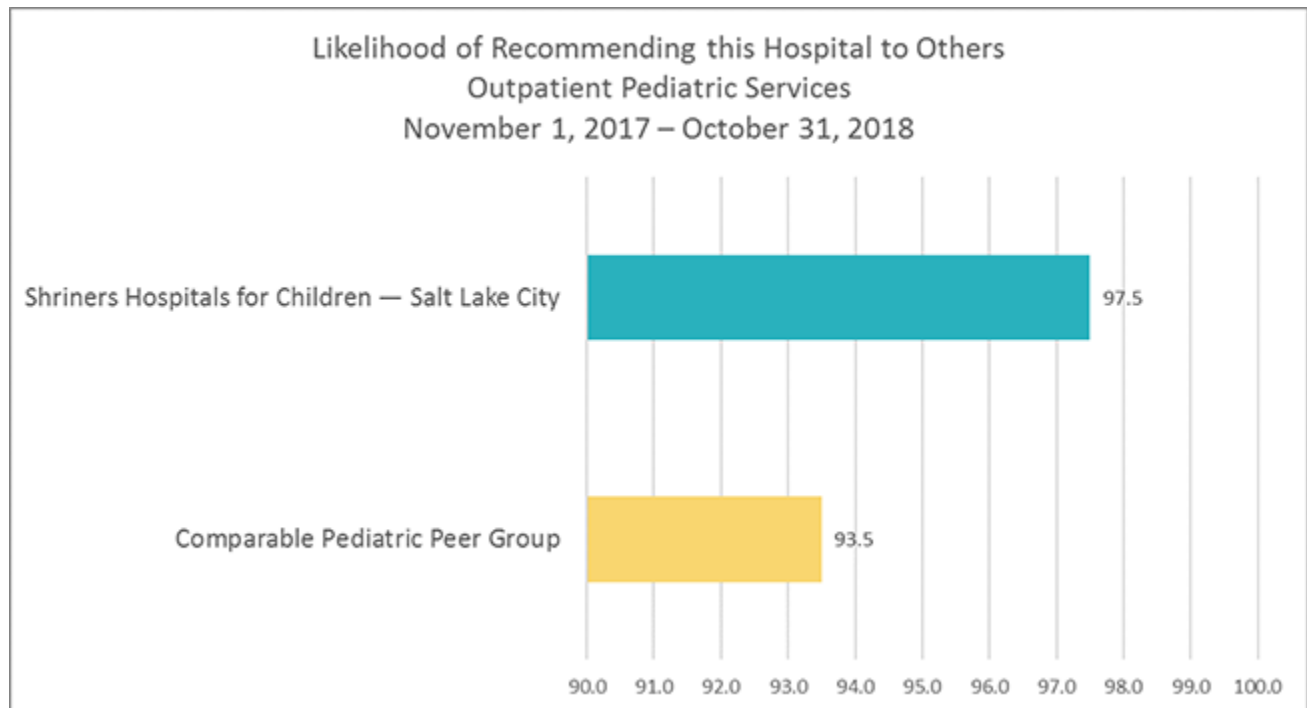
Exhibits

Exhibit 1: Patient satisfaction metrics

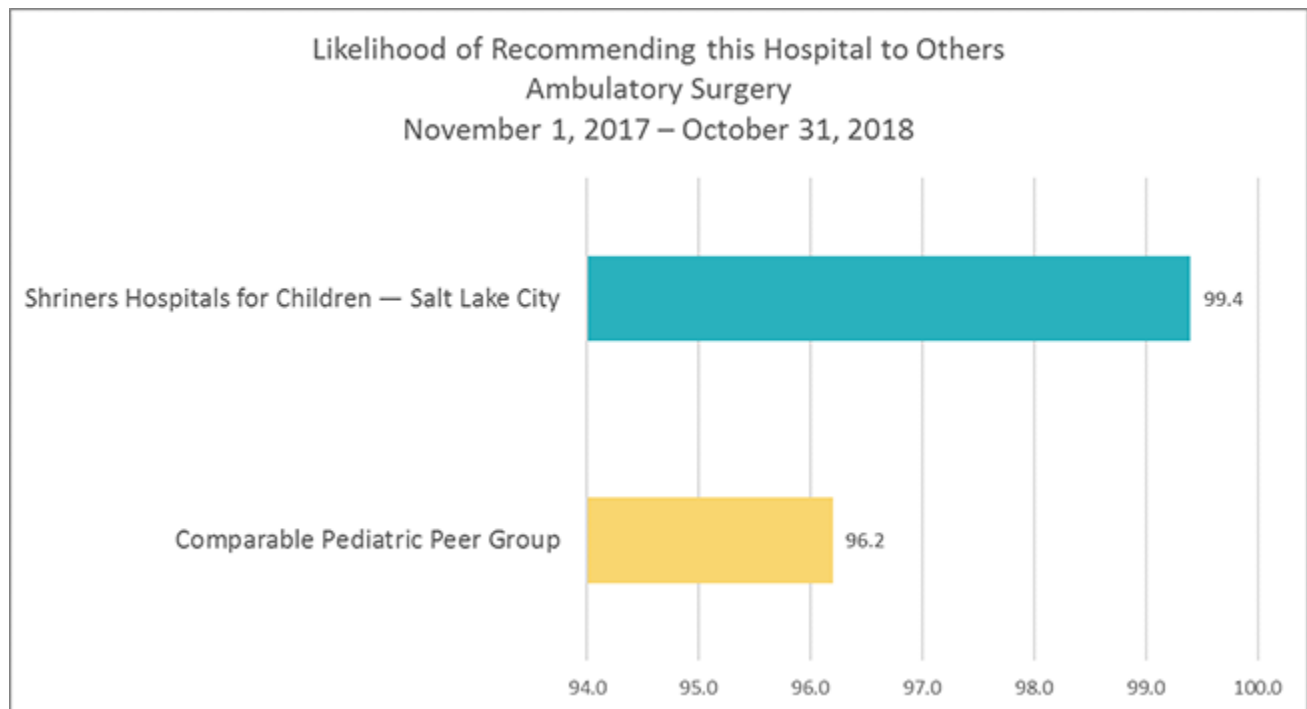
Inpatient services: November 1, 2017 – October 31, 2018



(Based on patient and family responses to Press Ganey survey. On a scale from 0 to 100, the average score of respondents when asked if they would recommend our hospital to others.)

Outpatient services: November 1, 2017 – October 31, 2018

(Based on patient and family responses to Press Ganey survey. On a scale from 0 to 100, the average score of respondents when asked if they would recommend our hospital to others.)

Ambulatory surgery: November 1, 2017 – October 31, 2018

(Based on patient and family responses to Press Ganey survey. On a scale from 0 to 100, the average score of respondents when asked if they would recommend our hospital to others.)

Exhibit 2: SHC-SLC Provider Survey

As one of our valued community health partners, we are asking you to complete this brief 9 question survey to help us understand your satisfaction with our services and patient referral process. Your answers will help us identify how we can best serve our communities and improve our relationships with community health leaders like you.

Please return this survey in the enclosed postage-paid envelope by July 31, 2018 or fax to 801-536-3521 (Attention: Jill Conner)

1. Why do you refer children to Shriners Hospitals for Children – Salt Lake City? (Check all that apply)

- | | |
|----------------------------------------------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> Charity care policy | <input type="checkbox"/> Free-standing pediatric facility |
| <input type="checkbox"/> Only place service was available | <input type="checkbox"/> Excellent reputation |
| <input type="checkbox"/> Past experience referring children to Shriners Hospital | <input type="checkbox"/> Convenience |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Patient / Family Preference |
| <input type="checkbox"/> Orthopaedic Expertise | |

2. For which of the following specialty conditions/services do you most often refer patients to Shriners Hospital for Children? (Check all that apply)

Orthopaedics

- | | |
|------------------------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> Amputations | <input type="checkbox"/> Scoliosis / Spinal Abnormalities |
| <input type="checkbox"/> Hip Disorders | <input type="checkbox"/> Sports Injuries |
| <input type="checkbox"/> Limb Length Discrepancy/Deformity | <input type="checkbox"/> Torticollis |
| <input type="checkbox"/> Non-emergent Fracture Care | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Positional Conditions | |

Specialty Clinics

- | | |
|-----------------------------------------------------|----------------------------------------------------|
| <input type="checkbox"/> Cerebral Palsy | <input type="checkbox"/> Osteogenesis Imperfecta |
| <input type="checkbox"/> Clubfoot | <input type="checkbox"/> Skeletal Dysplasia |
| <input type="checkbox"/> Cornelia De Lange Syndrome | <input type="checkbox"/> Special Needs Car Seating |
| <input type="checkbox"/> Hand Clinic | <input type="checkbox"/> Other _____ |

Plastic Surgery

- | | |
|----------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Correction of Ear Abnormalities | <input type="checkbox"/> Primary Nevus Excision |
| <input type="checkbox"/> Cyst Removal | <input type="checkbox"/> Scar and Burn Scar Revision |
| <input type="checkbox"/> Isolated Cleft Lip Repair | <input type="checkbox"/> Post-traumatic Reconstruction |
| <input type="checkbox"/> Other Craniofacial Procedures | <input type="checkbox"/> Other _____ |

Ancillary Services

- | | |
|------------------------------------------------------------|-------------------------------------------------------------------------|
| <input type="checkbox"/> Motion Analysis Center | <input type="checkbox"/> Occupational Therapy |
| <input type="checkbox"/> Physical Therapy | <input type="checkbox"/> Speech Therapy (for orthopaedic patients only) |
| <input type="checkbox"/> Prosthetics and Orthotics | <input type="checkbox"/> Recreation Therapy |
| <input type="checkbox"/> Wheelchair and Seating Department | <input type="checkbox"/> Other _____ |

3. During the past 12 months, did any of your patients who were referred to Shriners Hospital for Children have difficulty scheduling an appointment for any of the following reasons?

- ☐ Shriners does not provide treatment for referred condition
- ☐ Next available appointment was too far out
- ☐ Unable to reach scheduler / Call not returned

Please Explain:

CONTINUED

4. What is your preferred referral method?

- ☐ Fax referral form
- ☐ Email referral form
- ☐ Call to toll free referral line
- ☐ Patients self-refer

5. How satisfied are you with the overall quality of treatment your patients receive from Shriners Hospital for Children?

- ☐ Very Satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very Dissatisfied

6. How satisfied are you with the coordination of care and follow up communication regarding patients you have referred to Shriners Hospital for Children?

- ☐ Very Satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very Dissatisfied

7. What concerns you most about pediatric healthcare in Utah?

8. Are there pediatric health care services you would like Shriners Hospitals for Children to offer that we currently do not?

9. If you have any additional feedback regarding your experience with Shriners Hospital for Children that you would like to share, please do so in the space below.

Exhibit 3 – SHC-SLC Survey

Results

Shriners Hospitals for Children® - Salt Lake City

Community Health Needs Assessment

<u>Question</u>	<u>Possible Responses</u>	<u>Count</u>
1. Why do you refer children to SHC?	a. Charity Care Policy	26
	b. Only place service was available	6
	c. Past Experience referring children to SHC	33
	d. Other	0
	e. Orthopaedic Expertise	37
	f. Free Standing pediatric facility	4
	g. Excellent Reputation	28
	h. Convenience	5
	i. Patient/ family preference	9
2. For Which of the following specialty conditions/services do you most often refer patients to SHC?		
	<u>Orthopaedics</u>	
	a. Amputation	4
	b. Hip Disorders	29
	c. Limb Length Discrepancy/Deformity	24
	d. Non-emergent Fracture Care	17
	e. Positional Conditions	15
	f. Scoliosis/ Spinal Abnormalities	34
	g. Sports Injuries	13
	h. Torticollis	6
	i. Other	0
	<u>Specialty Clinics</u>	0
	a. Cerebral Palsy	21
	b. Clubfoot	27
	c. Cornelia De Lange Syndrome	2
	e. Hand Clinic	4
	f. Osteogenesis Imperfecta	12
	g. Skeletal Dysplasia	7
	h. Special Needs Car Seating	10
	i. Other	0
	<u>Plastic Surgery</u>	
	a. Correction of Ear Abnormalities	3
	b. Cyst Removal	1
	c. Isolated Cleft Lip Repair	3
	d. Other Craniofacial Procedures	3
	e. Primary Nevus Excision	1
	f. Scar and Burn Scar Revision	2

g. Post-traumatic Reconstruction	3
h. Other	0
Ancillary Services	
a. Motion Analysis Center	8
b. Physical Therapy	15
c. Prosthetics and Orthotics	25
d. Wheelchair and Seating Department	20
e. Occupational Therapy	8
f. Speech Therapy (orthopaedic patients only)	4
g. Recreation therapy	4
h. Other	0

3. During the past 12 months, did any of your patients who were referred to SHC have difficulty scheduling an appointment for any of the following reasons?

a. SHC Does not provide treatment for condition	2
b. Next available appointment was too far out	1
c. Unable to Reach Scheduler/Call not returned	6
d. No response	31
e. Explanation provided	0

4. What is your preferred referral method?

	0
a. Fax referral form	28
b. Email referral form	4
c. call toll free referral line	9
d. patients self refer	7

5. How Satisfied are you with the overall quality of treatment your patients receive from SHC?

a. Very Satisfied	33
b. Satisfied	6
c. Neutral	0
d. Dissatisfied	0
e. Very Dissatisfied	0

6. How satisfied are you with the coordination of care and follow up communication regarding patients you have referred to SHC?

a. Very Satisfied	22
b. Satisfied	12
c. Neutral	2
d. Dissatisfied	1
e. Very Dissatisfied	2

7. What concerns you most about pediatric healthcare in Utah?

Responded	21
Did not respond	21
Response (if responded)	

8. Are there pediatric healthcare services you would like SHC to offer that we currently do not?

Responded	6
Did not respond (assumes no)	36
Response (if responded)	

9. If you have any additional feedback regarding your experience with SHC that you would like to share, please do so in the space below.

Responded	17
Did not respond	23
Response (if responded)	

Question 3 Free Response Categories**Scores**

Scheduler on vacation	1
Refusal because desired service not offered	2
Scheduler was non-Spanish speaking	1
Call Not Returned	1
Difficulty with Travel	1
Difficulty reaching scheduler	1
Lack of Follow-up with patient	1

Interpretation of results (Nate Hill)

Expectations about the referral process, and type of care offered at SHC, are not clearly set with referring persons. Who is responsible for making contact, what services are and are not offered, etc.

Question 7 Response Categories

Lack of Care Coordination	1
Need for Pediatric Mental Health Services	8
Insurance Coverage	3
Access	9
Cost of Care	2
Need for alternative interventions to amputation (vague, survey 42)	1
EMR cross communication	1

Interpretation of results (Nate Hill)

The majority of referring entities to SHC are concerned about pediatric mental health services, and access to pediatric specialties

Question 8

concussion care	1
mental health services	3
genetics	1
cephalopalgia and helmets	1

Interpretation of results (Nate Hill)

the majority of individuals who responded to this question believe that Pediatric Mental Health Services continues to be an area that is neglected and they want SHC to fill that need

Question 9

Coordination of Care	1
Return Communication	3
Scheduling Difficulty	1
Complimented SHC	11

Interpretation of results (Nate Hill)

Expectations about the care coordination efforts and communication could be better established. Example; What information will be coordinated with the referring group? Additionally, the majority of individuals responding to the survey are very satisfied with SHC.

