

Shriners Children's Spokane Community Health Needs Assessment 2022

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Shriners Children's at a Glance

Shriners Children's® is a 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. Children up to age 18 with orthopedic conditions, burns, spinal cord injuries, and cleft lip and palate are eligible for care, regardless of the families' ability to pay. Within these broad service lines, many types of care are provided. For example, some locations offer reconstructive plastic surgery, treatment for craniofacial abnormalities, or care for sports injuries. Generally, care is provided until age 18, although, in some cases, it may be extended to age 21. All services are provided in a compassionate and family-centered environment. Our patients are our priority. We take the time to care and to listen. At Shriners Children's, every patient and family can expect respectful, compassionate, expert care.

The mission of Shriners Children's is to:

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, national origin, or ability of a patient or family to pay.

Shriners Children's is committed to its' employees and the diverse patient population which Shriners Children's serves. As a result, no person will be discriminated against because of race, religion, color, sex, sexual orientation, gender identity or expression, age, marital status, citizenship, national origin, genetic information, disability or any other protected class as outlined in applicable state or local regulations.

About Shriners Children's - Spokane

Shriners Children's Spokane improves the lives of children by providing pediatric specialty care, conducting innovative research and offering outstanding education programs for medical professionals. Children with orthopedic conditions, burns, spinal cord injuries and cleft lip and palate are eligible for care, regardless of the families" ability to pay and receive all care and services in a compassionate, family-centered environment.

The first Shriners Hospital was opened in 1922 in Shreveport, Louisiana. Our locations are primarily in North America, our compassionate health care system has treated children from many countries. The orthopedic Shrine Hospitals were among the first specialized pediatric orthopedic hospitals in North America. Many of the Shriners Hospitals' first patients were treated for problems caused by polio.



Shriners Children's mission is threefold, providing excellent pediatric orthopedic services, educating tomorrow's physicians and other health care providers and performing research to ensure quality care, develop new knowledge and improve the quality of life for our patients.

The Spokane Shriners Hospital has been caring for the pediatric orthopedic needs in our region for nearly 100 years. What began as a mobile unit in 1924, the hospital has grown into a beautiful state-of-the-art 30-bed hospital treating thousands of patients each year.

Shriners Children's Spokane treats kids up to age 18 from Washington, Idaho, Montana, Alaska and Canada and globally as well. In 2021, the hospital saw over 16,000 kids in the Outpatient Clinic. This represents a record number of patients in the Outpatient Clinic. The outpatient to inpatient surgery percentage continues to increase causing our average length of stay and average daily census to decrease. In addition to the increase in our outpatient visits the total number of surgeries have continued to rise as well, in 2021 our medical staff performed nearly 1000 surgeries.

The Spokane Shriners Hospital treats conditions ranging from serious orthopedic issues requiring multiple surgeries, to fractures or sports injuries easily corrected through same-day surgery. In addition patients also receive physical rehabilitation, radiology, lab services and casting all within the Spokane hospital.

Purpose

A Community Health Needs Assessment (CHNA) is a report based on epidemiological, qualitative, and comparative methods that assess the health issues in a hospital organization's community and that community's access to services related to those issues.

The Patient Protection and Affordable Care Act (PPACA) enacted on March 23, 2010, requires not-for-profit hospital organizations to conduct a CHNA once every three taxable years that meets the requirements the Internal Revenue Code 501(r) set forth by the PPACA. The PPACA defines a hospital organization as an organization that operates a facility required by a state to be licensed, registered, or similarly recognized as a hospital; or, a hospital organization is any other organization that the Treasury's Office of the Assistant Secretary ("Secretary") determines has the provision of hospital care as its principal function or purpose constituting the basis for its exemption under section 501(c)(3).

This assessment is designed and intended to meet the IRS needs assessment requirement as it is currently understood and interpreted by Shriners Children's leadership.

Shriners Children's Commitment to the Community

Shriners Children's Spokane is fortunate to have the largest group of fellowship trained pediatric orthopedic surgeons in our region. What that means to our families is that they are being treated by orthopedic specialists with the highest level of training.

The medical staff includes five pediatric orthopedic surgeons, two pediatricians; a dedicated hospitalist as well as a fellowship trained pediatric sports injury trained pediatrician, five pediatric trained orthopedic physician assistants and five pediatric trained anesthesiologists. Consulting staff includes hand, total joint, muscular dystrophy and thoracic specialists as well. Nursing staff, respiratory therapy, physical, occupational and speech therapists and recreational therapists with expertise in the management of the inpatient and outpatient pediatric orthopedic patient complete our team.

Medical Staff

- Pediatric Orthopedic Surgeons
- Pediatrician/Hospitalist
- Pediatrician Sports Medicine specialist
- Pediatric Trained Anesthesiologists
- Pediatric Physician Assistants
- Recreation Therapists/Child Life Specialists

What We Treat

- Scoliosis & Spinal deformities
- Foot and Ankle Disorders
- Hip, Knee and Leg Disorders
- Limb, Hand and Toe Disorders
- Adolescent Sports Injuries
- Fractures/Dislocations

Ancillary Services

- Rehabilitation therapy
 - Physical Therapy
 - Occupational Therapy
 - Speech Therapy
- Movement Analysis Lab

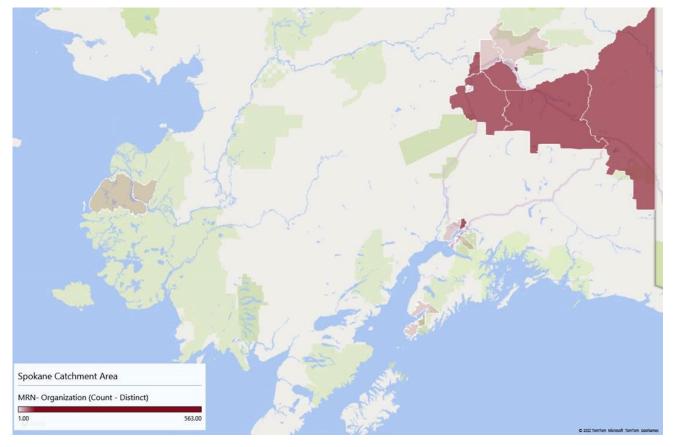
- Registered Nurses
- Physical Therapists
- Occupational Therapist
- Speech Therapist
- Respiratory Therapists
- Movement Analysis Gait Lab Experts
- Laboratory Technologists
- Radiology Technologists
- Pediatric Prosthetics & Orthotics
- Cerebral Palsy, muscular dystrophy
 & other neuromuscular conditions
- · Osteogenesis imperfecta
- Radiology services
- Casting services
- Full laboratory services
- Child Life/Recreation Therapy

Access to care has never been easier. The Spokane hospital is a great resource and safety net for children with pediatric orthopedic problems without insurance or ability to pay. We have active contracts with the top payors in the market. However, whether or not a family has insurance has never been a factor; acceptance for care is based only on medical need.

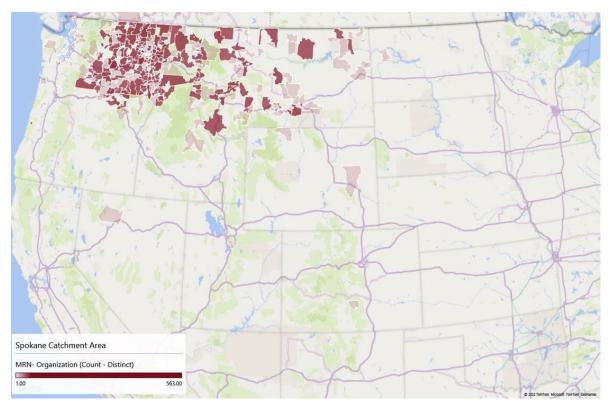


Caring for children beyond our borders is an important part of our mission. Our medical staff volunteers their time and expertise to patients in Mexico, Central America and Africa each year. In addition, every other month a team travels to our Nogales, Arizona outreach clinic to evaluate kids from Mexico with orthopedic concerns. We see more than 100 patients a year in the clinic and those children requiring surgery are brought to our hospital in Spokane for treatment.

Active Patient Map
SHC-Spokane 2021 Heat Map: Alaska



SHC-Spokane 2021 Heat Map: WA, ID, MT



SHC-

Spokane 2021 Heat Map: Canada



Patient Catchment Area



2022 State Breakdown: Where our Patients Come From

Washington	77%
Idaho	15%
Montana	4%
Alaska	1.5%
Canada	1%
All Others	1.5%

Washington State population

Washington State population steadily increased and topped 7.7 million residents in 2021

- Unadjusted population growth rate is much slower than 2020 at 0.8% compared to the previous year at 1.5%.
- From July 1, 2020, to July 1, 2021, Washington's population grew by about 19,900.
- Washington ranked in the middle of the pack for growth, at 24th among the 50 states.

As we expected, the COVID-19 crisis dramatically affected the 2021 estimates. The findings show a decrease in births, increase in deaths, a dramatic drop in migration, and in the population who live in group quarters. Many of the group quarters changes were large enough to cause population decline, particularly in areas with college dorms. Some of these changes are expected to be temporary, with population rebounding once pandemic impacts subside.

Despite a drop in migration due to COVID-19, migration continues to be the primary driver behind population growth in Washington State. From 2020 to 2021, net migration (people moving in minus people moving out) to Washington totaled 37,100, which is down 46,600 people from last year. Net migration accounted for 60% of the state's population growth, with natural increase (births minus deaths) responsible for the other 40%.

Consistent with previous years, over 70% of state population growth occurred in the five largest metropolitan counties: Clark, King, Pierce, Snohomish and Spokane. The eight counties with populations between 100,000 and 300,000 saw 18% of the state's growth followed by smaller counties with an 8% share. Franklin was the fastest-growing county between 2020 and 2021, with 2.8% growth, followed by Clark at 2.7% and Chelan at 2.4%.

Source: Office of Financial Management: ofm.wa.gov

https://www.doh.wa.gov/Portals/1/Documents/Pubs/78945-SHA.pdf

Spokane County, Washington Population 2022

Spokane County, Washington's estimated population is 550,383 with a growth rate of 1.70% in the past year according to the most recent United States census data. Spokane County, Washington is the 5th largest county in Washington. The 2010 Population was 472,081 and has seen a growth of 16.59% since this time. Spokane Valley remained the 10th-largest city in Washington, with a 2016 population of 96,340.

Average Household Income

Demographic and Socioeconomic Profile

Estimated Pediatric Population in 2027		1,245,227				
Estimated Pediatric Population in 2022	1,213,484					
Condition/Diagnosis	Incidence (I) or Prevalence (P)	Population 2016				
Cerebral Palsy	1.5 per 1,000 live births (I)	1,868	1,820			
Scoliosis	2-2.5 cases per 1,000 live births (I)	2,490	2,427			
Spinal Cord Injury	1.99 cases per 100,000 children (P)	25	24			
Club Foot	1 case per 1,000 live births (I)	1,245	1,213			
Acute Burns	15 cases per 10,000 U.S. residents <2 years (P)	1,868	1,820			
Cleft Lip and Palate	1 case per 500-550 live births (I)	2,264	2,206			
		Over 2.2% Decline in F	ed. Population			

*Includes only the US pediatric population and is inclusive of all markets (not just those where Shriners Hospitals exist).

Market Snapshot				
Spokane Catchment				
Report Created: 2/23/2022 10:5	8:04 AM			
	Market 2022	National 2022	Market 2027	National 2027
Average Age and Income	Population	Population	Population	Population
Average Age	39.6	40.0	40.4	40.8

\$39,150

					Market	
Population and Gender	Market 2022 Population	Market 2022 % of Total	Market 2027 Population	Market 2027 % of Total	Population % Change	National 2022 % of Total
Female Population	2,684,075	49.99%	2,819,900	50.03%	5.06%	50.76%
Male Population	2,684,632	50.01%	2,816,416	49.97%	4.91%	49.24%
Total	5,368,707	100.00 %	5,636,316	100.00 %	4.98 %	100.00 %

\$39,393

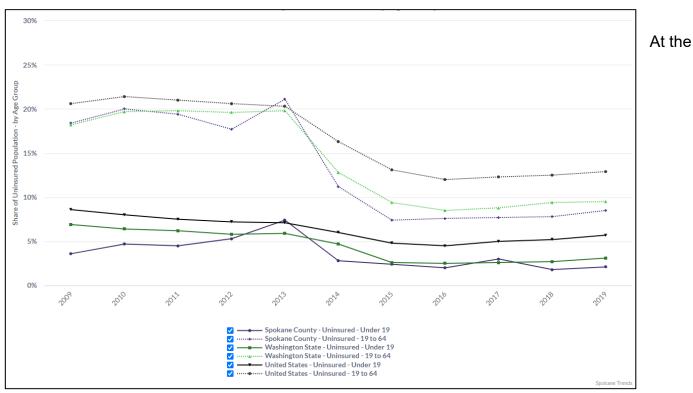
\$44,580

\$44,282

					warket	
Age Groups	Market 2022 Population	Market 2022 % of Total	Market 2027 Population	Market 2027 % of Total	Population % Change	National 2022 % of Total
00-17	1,213,484	22.60%	1,245,227	22.09%	2.62%	21.98%
18-44	1,925,328	35.86%	1,983,379	35.19%	3.02%	35.61%
45-64	1,278,936	23.82%	1,294,165	22.96%	1.19%	24.91%
65-UP	950,959	17.71%	1,113,545	19.76%	17.10%	17.50%
Total	5,368,707	100.00 %	5,636,316	100.00 %	4.98 %	100.00 %

Ethnicity/Race	Market 2022 Population	Market 2022 % of Total	Market 2027 Population	Market 2027 % of Total	Market Population % Change	National 2022 % of Total
Asian & Pacific Is. Non-Hispanic	301,454	5.62%	338,114	6.00%	12.16%	6.09%
Black Non-Hispanic	141,147	2.63%	157,248	2.79%	11.41%	12.45%
Hispanic	769,803	14.34%	871,839	15.47%	13.25%	19.26%
White Non-Hispanic	3,825,375	71.25%	3,907,338	69.32%	2.14%	58.82%
All Others	330,928	6.16%	361,777	6.42%	9.32%	3.38%
Total	5,368,707	100.00 %	5,636,316	100.00 %	4.98 %	100.00 %
Language*	Market 2022 Population	Market 2022 % of Total	Market 2027 Population	Market 2027 % of Total	Market Population % Change	National 2022 % of Total
Only English at Home	4,271,748	84.72%	4,491,111	84.75%	5.14%	78.18%
Other Asian-Pacific Lang at Home	51,503	1.02%	53,792	1.02%	4.44%	0.99%
Other Indo-European Lang at Home	41,904	0.83%	43,830	0.83%	4.60%	1.88%
Other Lang at Home	41,868	0.83%	43,845	0.83%	4.72%	1.14%
Spanish at Home	450,121	8.93%	472,886	8.92%	5.06%	13.46%
All Others	185,335	3.68%	193,728	3.66%	4.53%	4.35%
Total	5,042,479	100.00 %	5,299,192	100.00 %	5.09 %	100.00 %
Household Income	Market 2022 Households	Market 2022 % of Total	Market 2027 Households	Market 2027 % of Total	Market Households %	National 2022 % of Total
<\$15K	157,549	7.58%	144,895	6.62%	(8.03 %)	8.82%
\$15-25K	148,772	7.16%	135,953	6.21%	(8.62 %)	7.56%
\$25-50K	392,044	18.87%	368,963	16.85%	(5.89 %)	19.06%
\$50-75K	354,330		300,303	10.0070	(0.00 /0)	
	334,330	17 (15%	3/// 707	15 75%	(2.60 %)	
\$75-100K	277 590	17.05%	344,797 283 289	15.75% 12.94%	(2.69 %)	16.21%
	277,590 541 507	13.36%	283,289	12.94%	2.05%	16.21% 12.60%
\$100K-200K	541,507	13.36% 26.06%	283,289 618,603	12.94% 28.25%	2.05% 14.24%	16.21% 12.60% 24.79%
\$100K-200K	·	13.36%	283,289	12.94%	2.05%	16.21% 12.60%
\$75-100K \$100K-200K >\$200K Total Education Level**	541,507 206,341	13.36% 26.06% 9.93%	283,289 618,603 293,075 2,189,575 Market 2027	12.94% 28.25% 13.39%	2.05% 14.24% 42.03% 5.36 % Market Population %	16.21% 12.60% 24.79% 10.97%
\$100K-200K >\$200K Total	541,507 206,341 2,078,133 Market 2022	13.36% 26.06% 9.93% 100.00 %	283,289 618,603 293,075 2,189,575	12.94% 28.25% 13.39% 100.00 %	2.05% 14.24% 42.03% 5.36 %	16.21% 12.60% 24.79% 10.97% 100.00 %
\$100K-200K >\$200K Total Education Level** Less than High School	541,507 206,341 2,078,133 Market 2022 Population	13.36% 26.06% 9.93% 100.00 % Market 2022 % of Total	283,289 618,603 293,075 2,189,575 Market 2027 Population	12.94% 28.25% 13.39% 100.00 % Market 2027 % of Total	2.05% 14.24% 42.03% 5.36 % Market Population % Change	16.21% 12.60% 24.79% 10.97% 100.00 % National 2022 % of Total
\$100K-200K >\$200K Total Education Level** Less than High School Some High School	541,507 206,341 2,078,133 Market 2022 Population 129,445	13.36% 26.06% 9.93% 100.00 % Market 2022 % of Total 3.56%	283,289 618,603 293,075 2,189,575 Market 2027 Population 136,988	12.94% 28.25% 13.39% 100.00 % Market 2027 % of Total 3.56%	2.05% 14.24% 42.03% 5.36 % Market Population % Change 5.83%	16.21% 12.60% 24.79% 10.97% 100.00 % National 2022 % of Total 4.90%
\$100K-200K >\$200K Total Education Level**	541,507 206,341 2,078,133 Market 2022 Population 129,445 191,481	13.36% 26.06% 9.93% 100.00 % Market 2022 % of Total 3.56% 5.26%	283,289 618,603 293,075 2,189,575 Market 2027 Population 136,988 202,765	12.94% 28.25% 13.39% 100.00 % Market 2027 % of Total 3.56% 5.27%	2.05% 14.24% 42.03% 5.36 % Market Population % Change 5.83% 5.89%	16.21% 12.60% 24.79% 10.97% 100.00 % National 2022 % of Total 4.90% 6.64%
\$100K-200K >\$200K Total Education Level** Less than High School Some High School High School Degree	541,507 206,341 2,078,133 Market 2022 Population 129,445 191,481 900,347	13.36% 26.06% 9.93% 100.00 % Market 2022 % of Total 3.56% 5.26% 24.74%	283,289 618,603 293,075 2,189,575 Market 2027 Population 136,988 202,765 952,824	12.94% 28.25% 13.39% 100.00 % Market 2027 % of Total 3.56% 5.27% 24.77%	2.05% 14.24% 42.03% 5.36 % Market Population % Change 5.83% 5.89% 5.83%	16.21% 12.60% 24.79% 10.97% 100.00 % National 2022 % of Total 4.90% 6.64% 26.92%
\$100K-200K >\$200K Total Education Level** Less than High School Some High School High School Degree Some College/Assoc. Degree	541,507 206,341 2,078,133 Market 2022 Population 129,445 191,481 900,347 1,319,178	13.36% 26.06% 9.93% 100.00 % Market 2022 % of Total 3.56% 5.26% 24.74% 36.25%	283,289 618,603 293,075 2,189,575 Market 2027 Population 136,988 202,765 952,824 1,395,123	12.94% 28.25% 13.39% 100.00 % Market 2027 % of Total 3.56% 5.27% 24.77% 36.26%	2.05% 14.24% 42.03% 5.36 % Market Population % Change 5.83% 5.89% 5.83% 5.76%	16.21% 12.60% 24.79% 10.97% 100.00 % National 2022 % of Total 4.90% 6.64% 26.92% 30.84%

Spokane County Unisured Population by Age Group



Shriners Children's Spokane, insurance plans are accepted and care is provided for any child under the age of 18 with a medical condition within the hospital's scope of care, regardless of the families' ability to pay.

Process and Methods

The Shriners Children's Spokane Community Health Needs Assessment committee is comprised of representatives from the hospital with the knowledge of target markets and populations as well as the ability to gather critical data to create the CHNA. Administration, Patient Care Services, Marketing, Performance Improvement and Finance are the driving representatives in our CHNA.

The group goal is to address a need which is consistent with the mission of Shriners Children's Spokane and will make the most impact in meeting the healthcare needs of our community.

The Hospital developed its own primary data surveys, but also was able to benefit from existing local and regional efforts to determine the needs of the community. Staff from the Shriners Children's Spokane collaborated with a variety of local health care related organizations. Finally, the group researched pediatric orthopedic journals, websites, reports and studies for further insight to the plan.

The task set for the committee was to review existing data and gather new primary data. Surveys were developed to query; patient's families as well as Press Ganey Spokane Hospital specific surveys. For the purposes of this assessment, we focused our efforts on addressing access to quality specialty sports medicine medical care. How can we, as a pediatric healthcare provider contribute to increase access to urgent and non-urgent sports injuries medical care to increase successful outcomes for our youth athletes.

Target Population:

- Children 0-18 years old
- Living in Washington, Idaho, Montana, Alaska and Canada

Key Findings

Access Variables	SC Spokane Community need	SC Spokane Strategic Plan	SC Spokane Resources Available	Community Impact (High - Low)
Lack of pediatric orthopedic sports specialists	Yes	Yes	Yes	High
Need for access to immediate care	Yes	Yes	Yes	High
Specialized pediatric sports health and medicine education	Yes	Yes	Yes	High

Based on the results above, and given our mission and the resources we have available, Shriners Children's Spokane has chosen to focus its 2022 CHNA Action Plan on access to unmet healthcare needs related to the following topics:

- Lack of pediatric orthopedic sports specialists
- Need for access to immediate care for sports injuries
- Specialized pediatric sports health and medicine education

Shriners Children's Spokane recognizes that there are other identified unmet needs within the Spokane community population; however, due to the specialty nature of Shriners Children's (its mission, vision and values), its staffing and available resources, Shriners Children's Spokane is unable to care for these immediate needs.

Shriners Children's Spokane is integrally connected with many resources in the community to refer patients and families should patients require attritional assistance. Our Care Management department works closely with county and local health departments, Child Protective Services, institutions and agencies to help families find the assistance they need.

Youth sports are becoming increasingly popular in the United States. Children and adolescents are not small adults in their response to exercise and stress. According to the National SAFE KIDS Campaign and the American Academy of Pediatrics, more than 3.5 million injuries requiring medical treatment occur annually in youth sports. The U.S. Centers for Disease Control (CDC) & Prevention says that half of those injuries are preventable.

According to the CDC, participation in organized sports is on the rise, approximately 30 million children and adolescents participate in organized sports every year in the United States. The increase in pediatric sports brings an increase in pediatric sports injuries.

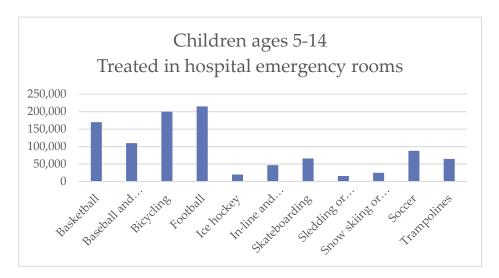
The following statistics are from the National SAFE KIDS Campaign and the American Academy of Pediatrics:

Injury rates:

- More than 3.5 million children ages 14 and younger get hurt annually playing sports or participating in recreational activities.
- Although death from a sports injury is rare, the leading cause of death from a sports-related injury is a brain injury.
- Sports and recreational activities contribute to approximately 21 percent of all traumatic brain injuries among American children.
- Children ages 5 to 14 account for nearly 40 percent of all sports-related injuries treated in hospitals. On average the rate and severity of injury increases with a child's age.

Obviously, some sports are more dangerous than others. Research has shown, rates of injury occurrence are higher in sports that involve contact and collisions, such as football, than in a noncontact sport such as swimming. However, all types of sports have a potential for injury, whether from the trauma of contact with other players or from overuse or misuse of a body part.

Most of the injuries occurred as a result of falls, being struck by an object, collisions, and overexertion during unorganized or informal sports activities.



As children get older, sports become more competitive the numbers increase, they train harder and and many children and adolescents participate in sports year round. Nearly seven million high school students participate in school sports every year. Because most high school athletes do not have access to trained sports medicine professionals on site (58%) and most high school coaches are not well trained in the recognition and provision of emergency treatment for catastrophic injuries and/or illness, death and/or lifelong disabilities have increased in recent years.

The statistics are getting the attention of many in the medical and sports communities with the message that something needs to change in providing medical care for athletes participating in youth sports.

Some reported statistics include:

- Among children, those aged 15-17 experience the highest emergency room visits for sports injuries.
- 50% of "second impact syndrome" incidents brain injury caused from a premature return to activity after suffering initial injury (concussion) result in death.
- The CDC reports that high school athletes suffer 2 million injuries, 500,000 doctor visits, and 30,000 hospitalizations each year.
- 400,000 brain injuries (concussions) occurred in high school athletics during the 2008-2009 school year.
- There are five times as many catastrophic football injuries among high school athletes as college athletes.
- Only 42% of high schools have access to athletic training services (allied health professional specializing in sports medicine).
- Overuse injuries are responsible for nearly half of all sports injuries to middle and high school students.

(National Athletic Trainers' Association, 2010): Safe Kids USA Campaign Web site. 2009

HIGH SCHOOL SPORTS

Participation in high school sports, one of the most popular physical activities among adolescents, has grown rapidly from an estimated 4.0 million participants in 1971-72 to an estimated 7.8 million in 2014-15.

Led by an encouraging report in football participation nationwide, participation in high school athletics increased for the 28th consecutive season to reach an all-time record in 2016-17 according to the annual *High School Athletics Participation Survey* conducted by the National Federation of State High School Associations (NFHS). The total number of athletes was an increase of 94,635 from the previous year and marked the largest one-year jump since 2000-01.

The organization estimates that 55.5 percent of all high school students play a sport - 2012 (total participation has continued to rise for that past 5 consecutive years).

The U.S. government produces limited data on sport participation and physical activity rates, and none on youth before high school age. In that void, the most robust data is generated through an annual household survey conducted by the Sports & Fitness Industry Association (SFIA).

Participation in team sports is up slightly from 2014 among children 6 to 12. While still not back to the levels of 2008, rates jumped last year more than three points, to 56.6 percent of kids. Among "core participants," those who play on a regular basis, the rate moved from 37.3 percent to 40 percent.

Source: Sports & Fitness Industry Association (SFIA)

Number of kids who play organized sports each year	36,250,000
Percent of parents who are worried about injuries in youth sports	87 %
Percent of kids who play sports outside of school	60 %
Percent of boys who play organized sports	66 %
Percent of girls who play organized sports	52 %

Source: statisticbrain.com/youthsportsstatistics

As state and national attention continues to increase on awareness, education, and prevention of catastrophic injuries in youth sports, both health care and sports organization advocates are stepping up and making a difference. Becoming educated on sports injuries is a good first step. Advocating for access to better medical care is also an important step. Last, protecting young athletes from further injury by getting athletes' injuries assessed by medical professionals and teaching our children not to "play through pain" together will all begin to help reduce the incidence of catastrophic injuries.

Top 10 Most Common Sports Injuries

- 1. Sprained Ankle
- 2. Torn ACL
- 3. Tennis Elbow
- 4. Concussion
- 5. Hamstring Strain

- 6. Pulled Groin
- 7. Shin Splints
- 8. Back Strain
- 9. Hamstring Strain
- 10. Runners Knee

It is not only in game situations, a large percentage of injuries occur during practice. Injuries not only result in lost playing time but also contribute to lost school and work time for youth athletes and their parents. Access to easy and immediate medical care is critical.

<u>Treatment of Sports Injuries in Children</u>

Physical injuries can affect the tendons, ligaments, bones, muscles, and more. Pain and swellings can be caused due to injuries to the knees, shoulders, elbow, back, and heel. Immediate treatment of a sports injury leads to better outcomes of recovery and return to sport. Injuries in children can adversely affect the growth of the bone or soft tissue that is damaged, which may lead to improper growth of bone and soft tissue if not treated in time.

In adolescents, bone biomechanical properties change drastically during growth spurts. Bone stiffness due to injury may put the child at risk for fractures at a later stage. While most sports injuries are minor and quickly healed, growing athletes should never ignore pain or swelling.

Whether an injury is acute or due to overuse, a pediatric athlete who develops a symptom that persists or that affects his or her athletic performance should be referred to a pediatric orthopedic doctor to receive timely treatment. Untreated injuries could lead to permanent damage or disability.

Primary Data Collection

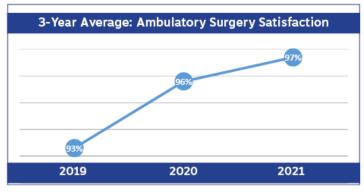
The Spokane Shriners Hospital partners with Press Ganey a patient experience company whose mission is to support health care providers in understanding and improving the entire patient experience.

We partner with clients across the continuum of care to create and sustain a high-performance environment to ultimately improve the patient experience. Press Ganey's proprietary **Listen-Lead™** model—data-driven, patient-focused—is proven to deliver exceptional care and patient experiences. The model is founded on the belief that every patient and stakeholder voice matters —and should have an opportunity to be heard – in sharing feedback about their care and their role in the care process.

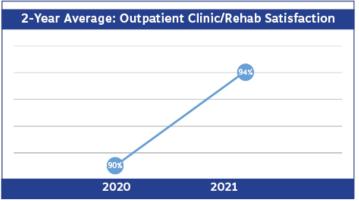
-- Press Ganey website

The survey is mailed to a set percentage of inpatient surgical, outpatient surgical and outpatient clinic encounters to survey parents or guardians of children who have recently had a visit to our Spokane facility. The survey helps the hospital staff learn how patients feel about the care provided and how to improve quality. Return rate is nearly 20%, the survey is voluntary and anonymous.

Reported Quarterly: Number reflects percentile rank as compared to our peers – other children's hospitals. Data shows Shriners Children's Spokane ranks 90% and higher than similar hospitals surveyed.



Steady increase in Ambulatory Surgery Satisfaction rate.



NOTE: Press Ganey developed a new survey method in 2020 for Outpatient services.

2021 Overall access to care satisfaction = %89%

Access to Shriners Children's Spokane Sports Medicine Program:

Shriners Children's Spokane has placed a priority on access to care to their sports medicine specialists. A dedicated RN/Intake specialist accepts and evaluates the referral directly with the sports medicine providers. There is a sports medicine "hot line" that goes directly to sports medicine program.

The hospital has set a weekly number of appointment slots for acute referrals. Each week, the acute slots are filled with athletes receiving care from the only pediatric orthopedic specialists in the region.

Results show the average time to appointment for Shriners Children's Spokane's sports medicine referrals is 2.54 working days, with many referrals with an appointment within one day.

Secondary Data Collection

NATIONAL HIGH SCHOOL SPORTS-RELATED INJURY SURVEILLANCE STUDY "To combat the epidemic of obesity among youth in the United States (US), adolescents must be encouraged to get up off the couch and participate in physically active sports, recreation, and leisure activities. Participation in high school sports, one of the most popular physical activities among adolescents, has grown rapidly from an estimated 4.0 million participants in 1971-72 to an over 7.9 million in 2018-19. While the health benefits of a

Table 2.1 Injury Rates by Sport and Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2018-19 School Year*

	# Injuries	# Exposures	Injury rate (per 1,000 athlete- exposures)	Nationally Estimated # Injuries
Overall total	3,969	1,732,499	2.29	1,307,414
Competition	2,257	489,701	4.61	748,085
Practice	1,712	1,242,798	1.38	559,329
Boys' football total	1,612	419,137	3.85	455,449
Competition	927	76,646	12.10	259,317
Practice	685	342,491	2.00	196,132
Boys' soccer total	351	191,873	1.83	184,656
Competition	229	59,301	3.86	120,217
Practice	122	132,572	0.92	64,439
Girls' soccer total	448	165,009	2.72	227,951
Competition	297	52,129	5.70	140,542
Practice	151	112,880	1.34	87,409
Girls' volleyball total	217	161,504	1.34	59,370
Competition	83	52,504	1.58	23,045
Practice	134	109,000	1.23	36,325
Boys' basketball total	342	212,605	1.61	87,521
Competition	196	63,448	3.09	48,318
Practice	146	149,157	0.98	39,203
Girls' basketball total	300	153,930	1.95	82,383
Competition	170	46,803	3.63	48,080
Practice	130	107,127	1.21	34,303
Boys' wrestling total	357	141,948	2.52	91,176
Competition	163	36,508	4.46	44,433
Practice	194	105,440	1.84	46,743
Boys' baseball total	175	169,591	1.03	52,889
Competition	101	60,878	1.66	30,158
Practice	74	108,713	0.68	22,731
Girls' softball total	167	116,902	1.43	66,019
Competition	91	41,484	2.19	33,975
Practice	76	75,418	1.01	32,044

^{*}Only includes injuries resulting in ≥1 days' time loss.

physically active lifestyle including participating in sports are undeniable, high school athletes are at risk of sports-related injury because a certain endemic level of injury can be expected among participants of any physical activity".

Table 2.7 Ten Most Common Injury Diagnoses by Type of Exposure, High School Sports-Related Injury Surveillance Study, US, 2015-16 School Year*

	Competition n=800,848		Practice n=590,882		Overall n= 1,391,730	
	N	%	n	%	n	%
Diagnosis	•	•	•	•	•	•
Head/face concussion	223,841	28.0%	118,656	20.1%	342,497	24.6%
Ankle strain/sprain	124,591	15.6%	93,788	15.9%	218,379	15.7%
Knee strain/sprain	74,107	9.3%	38,849	6.6%	112,956	8.1%
Hip/thigh/upper leg strain/sprain	31,308	3.9%	47,888	8.1%	79,196	5.7%
Knee other	40,296	5.0%	31,968	5.4%	72,264	5.2%
Hand/wrist fracture	26,833	3.4%	22,710	3.8%	49,543	3.6%
Shoulder other	24,582	3.1%	21,068	3.6%	45,650	3.3%
Shoulder strain/sprain	23,925	3.0%	16,961	2.9%	40,886	2.9%
Hand/wrist strain/sprain	17,426	2.2%	17,258	2.9%	34,684	2.5%
Hip/thigh/upper leg contusion	15,992	2.0%	9,081	1.5%	25,073	1.8%

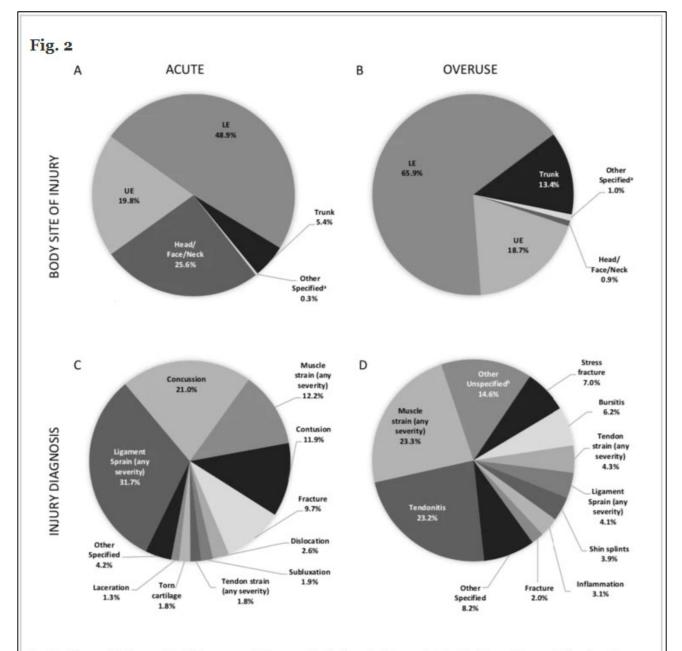
^{*} Totals and n's are not always equal due to slight rounding of the weighted number of injuries and missing responses. Due to a low level of non-response, these totals are always similar but are not always equal to the total number of injuries.

Table 2.3 Demographic Characteristics of Injured Athletes by Sex, High School Sports-Related Injury Surveillance Study, US, 2018-19 School Year*

	Male n= 804,828	Female n= 400,346
Year in School		
Freshman	21.0%	28.4%
Sophomore	24.5%	24.3%
Junior	26.3%	24.4%
Senior	28.2%	22.9%
Total [†]	100.0%	100.0%
Age (years)		
Minimum	12	12
Maximum	19	19
Mean (St. Dev.)	15.9 (1.3)	15.7 (1.3)
ВМІ		
Minimum	14.8	15.5
Maximum	56.7	42.9
Mean (St. Dev.)	24.9 (5.2)	22.5 (3.5)

There are two types of injuries to monitor: acute and overuse. Acute injuries typically happen as the result of a single event, such as a broken finger. In contrast, overuse injuries occur when activity levels are excessive over a short period or tissues break down because of specialization. Children need adequate time for the body to repair and recover.

Epidemiologic comparison of acute and overuse injuries in high school sports



Body Site and Diagnosis of Acute and Overuse Injuries. **A** shows the body sites of acute injuries. **B** shows the body sites of overuse injuries. ^a"Other specified" indicates injuries coded as "other" and "male genitalia". **C** shows the top 10 diagnoses of acute injuries, with remaining diagnoses shown as "other specified". **D** shows the top 10 diagnoses of overuse injuries, with remaining diagnoses shown as "other specified". ^bSee methods section for description of "other unspecified"

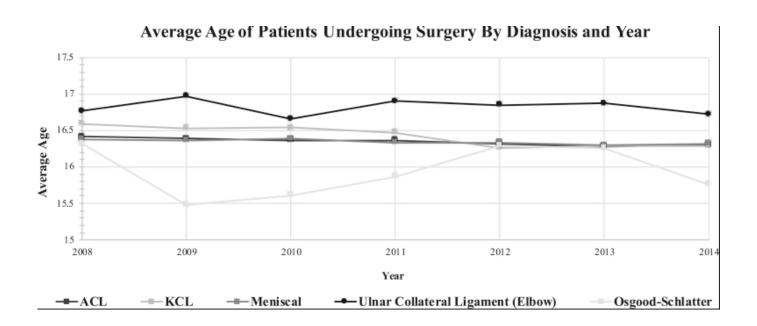
As sports activity participation has grown, so have the injuries. A published study. "Epidemiology of Surgical Treatment of Adolescent Sports Injuries in the United States", fournd that the proportion of high school sports-related injuries **requiring surgery**, has significantly increased during the last decade.

A total of 516,892 patients sustained 1 of the identified injuries, and 133,541 (25.8%) patients underwent a related surgery. Knee collateral ligament and meniscal injuries demonstrated a consistent increase in the rate of surgical intervention. Average age of surgical intervention did not increase or decrease overall for any diagnosis. Female adolescents were more likely to undergo surgery for KCL injuries and anterior cruciate ligament injuries, whereas male adolescents were more likely to undergo surgery for meniscal injuries and ulnar collateral ligament injuries

Reports show approximately 5 million children up to age 18 in the United States are seen by their primary care physician or a sports medicine clinic for injuries each year. And roughly 3 million kids go to hospital emergency rooms annually for sports-related injuries.

While ACL tears are one of the most common knee injuries, recurrence still happens for 25-33 percent of young, active individuals, according to recent data presented at the American Orthopaedic Society for Sports Medicine's Annual Meeting.

According to the American Academy of Pediatrics, more than 100,000 ACL reconstruction surgeries are performed in the U.S. annually. That number has dramatically increased by 147.8% among 14- to 18-year-olds over the last 10 years, and is increasing by at least 2% every year.



Action Plan

2018 Action Plan

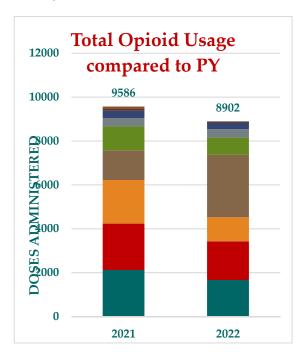
Because of known gaps in opioid knowledge and education, Shriners Children's Spokane staff recognized the need to educate patients and families to ensure there is clear understanding on how to use the medications safely and minimize their risks.

The hospital implemented an Opioid Safety Checklist and Secure Storage and Safe Disposal Instructions. In addition, the anesthesia medical team maintains safe "Pain Management Principles", focusing on reducing the use of opioids in the pediatric population.

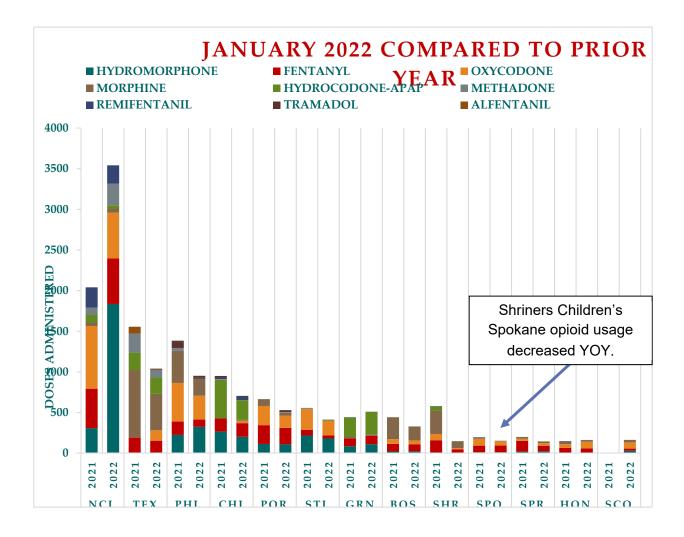
At the Spokane Shriners Hospital, Pediatric Anesthesiologists provide all inpatient pain management. The team rounds with the pediatric orthopaedic surgeons each day to ensure pain plans are clear and communicated.

2018 Action Plan Results

Detailed guideline protocols are utilized to ensure all staff are comfortable with the pain management plans. This reduces variability, improves patient safety and will reduce disagreement and support evidence based care. The staff continues to prescribe narcotics, when necessary, only as a part of anesthetic care. Shriners Hospitals for Children medical staff want parents to understand that there are effective alternative pain management strategies.



The chart above shows the system overall opioid usage has decreased year over year.

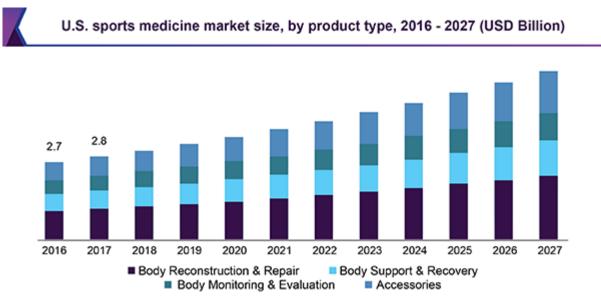


Written Comments on 2018 Community Health Needs Assessment

Shriners Children's Community Health Needs Assessment and implementation was made widely available to the public on Shriners Children's website at https://www.shrinershospitalsforchildren.org/shc/chna

In addition to posting the Community Health Needs Assessment, contact information including email were listed. No comments or questions were received.

2022 Action Plan and Performance Measures



Source: www.grandviewresearch.com

Shriners Children's Spokane chose to focus its 2022 CHNA Action Plan on unmet community education needs that relate to the following topics:

- Address health care disparities, such as access, treatment and outcomes with respect to youth sports injuries.
- Develop changes to drive positive health outcomes for youth sports injuries.
- Demonstrate the value of children's specialty hospitals and health systems.

Shriners Children's Sports Health and Medicine:

The Shriners Children's pediatric-trained team of doctors, athletic trainers and physical therapists understand the importance of early injury recognition and provide easy access to specialized, age-appropriate care for student-athletes needs-- all in one place.

Whether an injury is acute or due to overuse, an athlete who develops a symptom that persists or that affects his or her athletic performance should be examined by a doctor. Untreated injuries could lead to worse injury, permanent damage or disability. When a growing athlete is injured in practice or competition, getting the right diagnosis and initiating proper care and treatment as quickly as possible is a top priority. The team at Shriners Children's Spokane has expedited access to care for acute sports injuries.

Pediatric Sports Medicine Program

- Priority access to sports injury appointments
- Expedited access to surgery for urgent, acute injuries
- On-site, same day radiology
- Personal 1-on-1 individualized rehabilitation

Shriners Children's Spokane's medical team members are the region's specialists in pediatric orthopedic care. The multidisciplinary sports health and medicine team has advanced training and experience in pediatric sports medicine to treat the unique sports-related medical needs of children and teens.

OUR TEAM:

- Pediatric orthopedic surgeons
- Pediatricians
- Physician assistants
- Physical therapists
- Athletic trainers

Our medical team specializes in the whole athlete:

- Sports & recreation-related concussions
- Bone stress/overuse injuries
- Relative Energy Deficiency in Sports & Female Athlete Triad evaluations
- Medical evaluations for return to sport clearance

Athletes often downplay their symptoms in order to continue playing. Coaches and parents should be aware of common signs of injury; pain with activity, changes in form or technique, pain at night, and decreased interest in or ability to practice.

When a young athlete is injured, they require more specialized expertise -- a referral to a pediatric sports medicine primary care physician or pediatric orthopedic surgeon who specializes in sports in youth is important. The Spokane Shriners Hospital has both, and employs the only pediatrician in the region with additional year of subspecialty training and board certification in sports medicine. He has training is specifically focused on evaluating pain and injuries in young athletes. Accessing this care and can make a positive difference in the outcome.

Young athletes are still growing, they are not small adults. They have growth plates and other anatomical differences as well as unique emotional needs. It is important to take them to a pediatric specialist who is experienced in diagnosing and treating youth sports injuries. Our team is a part of the community. You will find the pediatric sports medicine team from the

Shriners Children's Spokane on the sidelines, providing medical support and coverage to club and school sports teams. This connection allows our team to provide comprehensive care from the time of the injury through rehabilitation. The goal is to return our patients to their sport safely and as soon as possible.

The medical staff in the Sports Health and Medicine team at the Spokane Shriners Hospital has the expertise, experience and qualifications to treat acute and chronic musculoskeletal injuries. They will determine the extent of injury and provide a comprehensive care plan for a wide range of injuries and conditions affecting athletes in all sports and physical activities, at all levels of competition.

What We Treat:

- Ankle instability
- Anterior cruciate ligament tears (ACL)
- Accessory navicular Syndrome
- Acromioclavicular joint separation (AC)
- Articular cartilage injuries
- Back injuries
- Discoid meniscus
- Tendon ruptures
- Elbow dislocations
- Exertional compartment syndrome
- Fractures
- Golfer's elbow
- Growth plate injuries
- Hamstring ruptures
- Knee injuries

- Meniscal tears
- Patellar instability
- Pelvic avulsions
- Rotator cuff tears
- Shoulder instability & labral tears
- Sinding-Larsen-Johansson Syndrome (SLJS)
- Sports related concussion
- Stress fractures
- Sternoclavicular joint instability
- Syndesmotic injuries
- Tendon ruptures
- Tennis elbow/lateral epicondylitis
- Thrower's shoulder
- Tibial spine avulsions
- Turf toe

Comprehensive care

Our orthopedic and sports rehabilitation specialists work alongside each athlete and their family to develop a personalized and age-appropriate treatment plan to help athletes recover and manage their specific injury. This focused approach aids in safe return to sport in a timely manner.

Working closely with our medical team, our sports medicine physical therapy program offers exceptional on-site care and individualized treatment plans focused on maximizing your student-athletes' recovery progress. Shriners Children's Spokane is home to a new, state-of-the-art sports medicine gym. Patients can seek treatment and rehabilitation services in one location.

Rehabilitation Services

- Rehabilitation of fractures, sprains, strains & tears
- Pre-surgical rehabilitation to optimize surgical outcomes
- Return-to-play evaluations
- Isolated strength assessment with Biodex[™] equipment
- Gait lab force plate assessment on landing & jumping mechanics
- Concussion treatment
- Concussion baseline testing
- Injury prevention
- Custom bracing & fitting
- Biomechanical run, jump & movement analysis

We understand the needs of athletes and partner with families, coaches, local therapists and athletic trainers to create injury prevention plans to fit the sport they play and safely return the athlete to the competition they love.

Rehabilitation Services for Sports Injury Surgical Patients:

If surgery is required, athletes may see a physical therapist or athletic trainer to explain the rehabilitation plan for helping the child heal and return to sports. The team will teach your child exercises they will need to do. After surgery your child comes back to work with our sports rehab team on these exercises.

Patient and Family Education:

The American Orthopaedic Society for Sports Medicine (AOSSM) states that returning to sport after an injury and not suffering a second injury is a concern and common. What is important teaching kids how to prevent re-injury, which can be "tricky".

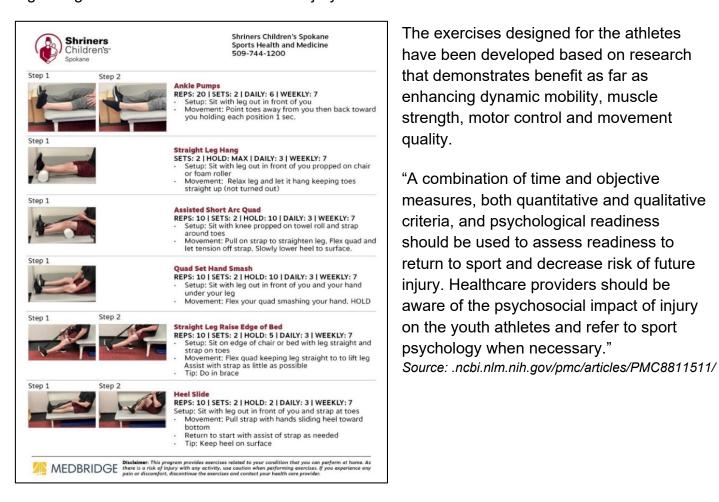
 The AOSSM report shows that the incidence of a second ACL injury after having it repaired ranges from 25 – 33% in young, active individuals, with the greatest risk being in the first year after treatment.

Shriners Children's sports medicine specialists are committed to educate the injured athletes on injury prevention a part of the discharge information.

Return to Sport Readiness

The Sports Health and Medicine program at Shriners Children's Spokane is focused on safe return to play criteria and patient education. It is important to provide individualized rehabilitation, and adequate healing time. The decision to return to play for a youth athlete is made by the medical team, physical therapist, coach and family.

The athlete will be asked to pass functional tests to be cleared by sports medicine medical team before returning to activity. The physical therapists blend their skills in sports medicine and their unique knowledge of pediatric growth and development to provide comprehensive care for the growing athlete who has sustained an injury.



The exercises designed for the athletes have been developed based on research that demonstrates benefit as far as enhancing dynamic mobility, muscle strength, motor control and movement quality.

"A combination of time and objective measures, both quantitative and qualitative criteria, and psychological readiness should be used to assess readiness to return to sport and decrease risk of future injury. Healthcare providers should be aware of the psychosocial impact of injury on the youth athletes and refer to sport psychology when necessary."

Treatment and rehabilitation for children and adolescents is different from adults, it is important to receive care plans from a sports medicine team who specialize in athletes who are still growing. The Shriners Children's Spokane sports health and medicine team have the knowledge and appreciation of various aspects of the growing athlete to successfully return youth athletes to sport after injury. "Youth are undergoing changes both physiologically and psychologically which warrant consideration. As such, protocols and recommendations created for adults cannot merely be extrapolated to children and adolescents."

Source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8811511/

Having had a previous injury predisposes the athlete to re-injury. This means an injured athlete who returns to competition before sufficient recovery and reconditioning carries an increased risk of injury.

Shriners Children's Spokane focuses on conservative return to sport protocol to avoid re-injury. Recurrence may be due to returning to activity too quickly.

Sample: Shriners Children's Return to Sport Protocol ACL

- 1. Pre-Operative Rehabilitation
- 2. Post- Operative Rehabilitation

Phase 1: Return to function	phase/Recovery	/ phase	(1-4 weeks)
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Phase 2: Strength Phase/Neuromuscular Control (4 weeks – 12-16 weeks)

Phase 3: Running/Agility and Landing phase (4 months – 7 months)

Phase 4: Advanced Agility and Landing (7-9 Months)

Phase 5: Return to Sport Phase (9-12 Months)

Return to Practice Phases:

- o 1st 2 weeks practicing on stable surface non-contact for drills
- o 2nd 2 weeks practicing on native surface non-contact for drills
- 3rd 2 weeks progressing into contact drills in graded environment
- 4th 2 weeks progress back to full competition

Return to Competition: 9 Month or greater since surgery

- Biodex at 90% LSI: Quad/Hamstring ratio 50-80%
- Maintenance Program X 6 months

Injury Prevention

Injury prevention training is critical, especially for children who are still growing, playing the same game all year. Young athletes need to properly prepare for high-intensity activity well before taking the field.

With millions of children participating in sports across the United States, a number of injuries are to be expected. Mild injuries such as strains, sprains, and contusions are seen most often, however significant injuries do occur. Young athletes are at an increased risk for growth plate injuries, overuse injuries, and other sports related injuries. Sports injuries can be prevented with proper education.

Shriners Children's Spokane sports health and medicine are committed to educate their patients as well as increase community awareness to keep children safer on the field, the court or gym.

Injury prevention tips:

- 1. Get a sports physical prior to beginning any new sports program
- 2. Start gradually
- 3. Sleep is essential for injury reduction and muscle performance
- 4. Hydrate sufficiently during activity
- 5. Get proper nutrition
- 6. Stretch and warm up before every activity
- 7. Strength and conditioning training are critical
- 8. Increase strength gradually
- 9. Recognize injuries early in young athletes
- 10. Do not play through pain
- 11. Use the right equipment
- 12. Athletes should create an off-season

Conclusion

2022 Community Health Needs Assessment Report Available Online or in Print

The 2022 Community Health Needs Assessment is available at:

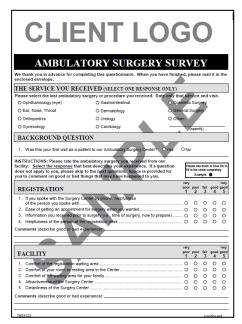
https://www.shrinershospitalsforchildren.org/shc/chna

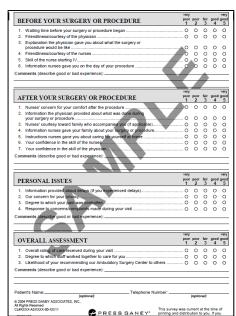
05/20/2022

Date adopted by authorized body of hospital

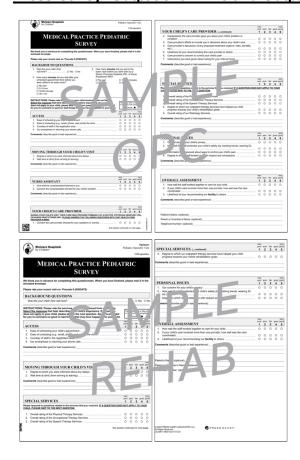
Exhibits

Press Ganey: Ambulatory Surgery Survey





Press Ganey: Outpatient Clinic and Outpatient Rehab Services



Acknowledgements

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