Dear Friend,

As part of the Shirley Ryan AbilityLab family, you know that we help patients recover abilities — physical and/or cognitive functions that have been lost or impaired. We also help these courageous people return to full lives.

This report offers you a glimpse into our accomplishments from the past fiscal year and highlights the many ways in which we are bringing our world-class resources into the broader community.

In sharing our news, we invite you to join us as we celebrate our Paralympic champions, marvel at the promise of research for patients with all diagnoses, better understand how art therapy creates hope and learn how employees from all over our organization are making a difference in the lives of our patients.

Without our generous donors and champions like you, these programs and this critical work simply could not exist.

Clearly, together we are making an impact on so many individuals — not just on our patients, but also on everyone who loves them, including you.

With gratitude,

Laura Ferrio, MBA, MSN, RN, CRRN, NEA-BC
Senior Vice President, Chief Advancement Officer
President, Keystone Board

Graduate Medical Education ........................................... 21

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FY21 by the Numbers

59
Community members placed in jobs

NEARLY

50,000
Patients served in 30 sites of care throughout Illinois

31
Years ranked No. 1 by U.S. News & World Report

328
COVID patients received acute inpatient rehabilitation

800,000+
Residents throughout Chicago’s 7 counties report having a disability

34
Peer mentors helped patients envision the possibilities of life after discharge

44
Patients referred to us from 44 countries

$560,497
In financial assistance provided to patients in need

3,452
Inpatients spent 77,013 Days at Shirley Ryan AbilityLab

200
Ongoing research projects

186,646
Outpatient visits
In November 2020, Shirley Ryan AbilityLab announced a Diversity, Equity and Inclusion council to assess our current state of diversity and to develop initiatives that promote a strong culture of inclusion and equity practices.

In December, the Inclusion, Diversity, Equity and Action (I.D.E.A.) Council’s 14 inaugural members were announced. The Council brings together a diverse group of employees who represent various sites of care, career levels, functional areas and roles. Members also represent diversity in race, ethnicity, sexual orientation, country of origin, age and functional impairment.

In July 2021, the I.D.E.A. Council rolled out a new policy, “Offensive and Discriminatory Behavior by Patients, Visitors and Research Study Participants.” The new policy sets forth procedures for addressing patients, visitors and research study participants who engage in disrespectful and discriminatory behavior. The Council is also developing a mentorship and job-shadowing program, as well as identifying ways to promote skill and professional development.

New Initiatives in FY21

COVID CARE UNIT

After a prolonged hospital stay due to COVID-19, including time spent in an intensive care unit (ICU), rehabilitation plays a critical role in recovery. Our interdisciplinary team of experts worked with patients, many formerly on ventilators, who were experiencing ongoing shortness of breath, muscle weakness and poor endurance, dexterity and fine motor skills. These patients had trouble swallowing, talking and walking, as well as cognitive issues. Some developed blood clots. To date, the Shirley Ryan AbilityLab COVID Care Unit has treated more than 328 survivors requiring in-patient rehabilitation — the youngest of whom is 18 years old, the oldest is 96.

In the medical community, there is an assumption that shortness of breath is the result of lung damage following COVID pneumonia. However, Shirley Ryan AbilityLab physician-research scientist Colin Franz, MD, PhD, hypothesized that because the diaphragm is negatively affected following severe COVID — just as are other muscles in the body — diaphragm weakness may be a large contributor to this post-COVID breathing impairment.

In a study of 21 survivors admitted to the COVID Care Unit, approximately 80% showed some kind of diaphragm abnormality during ultrasound examination. In fact, 67% of the patients experienced impairments related to the diaphragm’s ability to inflate and contract the lungs, and 18% showed diaphragm muscle atrophy.

Dr. Franz is now treating patients for this condition through neuromuscular re-education. “We actually have to retrain them to breathe,” he said. “Like lifting weights in the gym for your arms and legs, you can add resistance to your breathing muscle actions. The good news is that we can build back the muscle.”

In July 2020, Roberto Rodriguez was hospitalized with severe COVID-19. On Thanksgiving Day, he underwent a double-lung transplant. On May 26, 2021, after five months of intensive therapy at Shirley Ryan AbilityLab, Roberto was strong enough to hug his wife, Silvia, and greet his family in an emotional reunion at discharge.

“Our entire team is inspired by his motivation and his drive to make progress, as well as the support he has from his family to help him along the way.”

— Matthew Oswald, MD
Shirley Ryan AbilityLab Physician

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Shirley Ryan AbilityLab practices “translational” research — the first-ever model for delivering medical care in which research is applied directly (“translated”) during patient care. Patients receive treatment in a space shared with researchers. As a result, more patients are involved in research, and more research is translated into patient care. In FY21, more than 200 Shirley Ryan AbilityLab research studies and clinical trials were underway, all of which promise to bring about better outcomes for our patients.

Findings have the potential to help the approximately 294,000 people in the United States who live with spinal cord injuries.

**REGAINING ABILITIES FOLLOWING SPINAL CORD INJURY**
For the first time, research conducted at Shirley Ryan AbilityLab has demonstrated that noninvasive neurostimulation, combined with physical therapy, temporarily mends the broken connection between the brain and spinal cord. As a result, this novel treatment approach has the ability to maximize functional gains in patients with spinal cord injury (SCI). Monica Perez, PT, PhD, Scientific Chair of The Harris Family Foundation Arms + Hands Lab, is the only scientist in the United States using this approach to target spinal synapses in SCI patients. To date, more than 60 people with chronic incomplete spinal cord injury have participated.

Amber Bruce, an Atlanta resident and sports marketing professional, inexplicably fainted on January 31, 2019. When she regained consciousness, she was nearly completely paralyzed. Initially, she was told that she would never walk again. Since then, however, she has worked tirelessly to regain function and ability through physical therapy and participation in Dr. Perez’s unique clinical trial. After 40 sessions of noninvasive neural stimulation, followed by an hour of physical therapy each time, she took her first steps. By the end of the treatment protocol, two-and-a-half months later, she could take more than 60 steps.

“I am going to improve. I am going to walk.” — Amber

**CATALYST GRANTS: EMPLOYEE-DRIVEN RESEARCH**
The Shirley Ryan AbilityLab Catalyst Grant Program empowers employees from all corners of the organization to develop innovative solutions for specific patient, caregiver, hospital or organizational challenges. This program represents just one of the many ways Shirley Ryan AbilityLab integrates research with the highest quality clinical care. Catalyst Grants are funded through generous gifts made by Sheli and Burt Rosenberg and other anonymous donors who have a keen interest in translational medicine. Grants are available at four different levels, with specific requirements matching the complexity, required expertise and cost. Recently awarded projects include:

- **Novel Adaptive Bike Braking System for People with Tetraplegia**
- **The Causal Influence of Prayer on Anxiety During Acute Stroke Rehabilitation: A Meditation Analysis Study**
- **The Functional Outcome of Individuals Admitted for COVID-19**
- **Development of an Educational Module to Improve the Quality of Resident Physicians’ Communication with Patients with Aphasia (PWA)**
- **Advancement of Skilled Prosthetic Training: A Web-Based Tool for Physical Therapists Treating Patients with Lower-Limb Amputation**

**AUTONOMOUS WHEELCHAIR**
Brenna Argall, PhD, is creating a partially autonomous wheelchair, a concept inspired by technologies developed in the automotive industry (e.g., lane assist, emergency braking, automatic parallel parking). By balancing human and artificial intelligence control, the wheelchair can avoid obstacles, plan and navigate routes and maneuver in tricky spaces. To test and refine the sophisticated device, Dr. Argall’s team built a “real world” course in her lab, complete with doors, ramps and sidewalks. Simultaneously, the team is also developing datasets of how patients, including those with spinal cord injuries, use different wheelchair interfaces.

See how patients with SCI are making significant gains in ability as a result of Dr. Perez’s groundbreaking research.

Check out some of these employee Catalyst research projects.
Engaged
155 adults and children in adaptive sports

Community-based Quality of Life Programs

ADAPTIVE SPORTS
Shirley Ryan AbilityLab continued to offer Chicago’s most comprehensive adaptive sports program, introducing participants of all ages to the social and fitness benefits of competitive and recreational adaptive sports. In FY21, the program rostered 90 adults in 6 sports, including sled hockey, wheelchair softball, handcycling and more. The program engaged participants of every ability — from novices eager to try a new sport to athletes training for elite-level competition, including the Tokyo 2020 Paralympic Games!

Meet two Shirley Ryan AbilityLab athletes who competed in the Tokyo 2020 Paralympic Games this past summer.

17-year-old Ixhelt Gonzalez started in the Tengelsen Family Foundation Sports for Kids program at age seven. She started playing wheelchair basketball for fun and as a way to make friends. Ixhelt made the 2018 U.S. Women’s Wheelchair Basketball National Team roster at age 13 and remains the youngest player on the team. Ixhelt returned home from Tokyo in September with a bronze medal!

Kelsey LeFevour, a former patient, competed in two track and field wheelchair events at the Tokyo Paralympics: the T53 100-meter and 400-meter races. ("T53" is a classification used at the Paralympics to indicate athletes with various types of functional impairment, including spinal cord injuries.) Born with the spinal conditions scoliosis, kyphosis and diastematomyelia, Kelsey got her start in adaptive sports in the Sports for Kids program.

A special moment happened during a Shirley Ryan AbilityLab Blackhawks Sled Hockey practice. Congrats to teammates and newlyweds Kevin and Erica! Peek in on Kevin’s proposal.
TENGELSEN FAMILY FOUNDATION SPORTS FOR KIDS

In FY21, the Tengelsen Family Foundation Sports for Kids program provided adaptive sports and fitness offerings to 65 low-income children with conditions affecting ability. In partnership with the Chicago Park District, Shirley Ryan AbilityLab continued to offer the only youth wheelchair basketball and wheelchair softball leagues in the city. This year, the program engaged youth through adaptive sports clinics in tennis, cycling, archery and soccer, as well as our annual, week-long spring break and summer sports camps. During the winter months, Sports for Kids offered virtual fitness classes every Thursday and provided youth with specialty equipment. This offering was especially important to ensuring that participants stayed fit and avoided social isolation at home during the pandemic.

Sports for Kids continued to provide services and equipment at no cost for the vast majority of programs. As the majority of participants live on the south and west sides of Chicago, Sports for Kids offered free busing to and from activities to reduce or eliminate the burden of accessing reliable transportation.

Without this service, more than 50% of youth would have been unable to participate in programming.

GOLDMAN FUNCTIONAL FITNESS

The Goldman Functional Fitness Program focuses on improving individual ability to eliminate barriers to activity, improve ease of doing daily living activities, lessen dependence on caregivers and increase the likelihood of long-term physical independence.

The Goldman Functional Fitness Program is different from personal training in that it entails one-on-one sessions led by a degreed exercise physiologist and is directed specifically at improving neuromotor fitness, functional ability level and quality of life.

In FY21, the program served 248 clients during a total of 4,350 in-person and virtual individual and group sessions. The youngest program participant this year was 18 years old, while the oldest was 88. Although Shirley Ryan AbilityLab clinicians see patients with a broad range of diagnoses, the majority of participants had lost some function due to stroke (18.6%), spinal cord injury (16.6%), Parkinson’s disease (13.1%) or traumatic brain injury (6.9%).
CHARITY CARE
Shirley Ryan AbilityLab is dedicated to providing the highest-quality patient care and better outcomes — regardless of a patient’s ability to pay. The hospital’s Charity Care Fund provides underserved adults and children, many living on Chicago’s south and west sides, with full access to the best rehabilitation care.

In FY21, the hospital provided $560,497 in Charity Care to 983 pediatric and adult patients, including those in need of inpatient, outpatient and day rehabilitation care; creation and fitting of prosthetic limbs and orthotic braces; physical, speech, occupational and recreational therapy; and assistive technology.

In a city where 1 in 10 Chicago residents are living in poverty, Shirley Ryan AbilityLab makes sure that all who need the best rehabilitation care can receive it.

VOCATIONAL REHABILITATION
The Vocational Rehabilitation Program promotes equal access to employment for patients and community members who have lost ability due to serious injury or chronic conditions. In FY21, counselors connected 59 individuals with productive jobs suited to their ability level. Program staff also responded to 1,026 referrals for additional support services, which included one-on-one counseling, return-to-work evaluations and job analyses, assistance with navigating disability policies and workplace accommodations, and work trial assessments or internships.

Shirley Ryan AbilityLab is the only hospital-based vocational program in Chicago to provide this level of assistance.

In FY21, the Vocational Rehabilitation Program piloted a new initiative — Virtual Vocational Rehabilitation Program for People with Parkinson’s Disease. Many individuals with Parkinson’s experience functional changes as their disease progresses. Such changes can impact job performance.

Our vocational rehabilitation counselors connected virtually with this population during the pandemic (and continue to do so!), thereby helping individuals navigate these situations, e.g., aid in the decision to disclose his or her diagnosis, request accommodations such as assistive technology or interview for new jobs.

Provided $560,497 in Charity Care to 983 patients

Provided

Connected

59

individuals with productive jobs

Provided

$560,497 in Charity Care to 983 patients
ASSISTIVE TECHNOLOGY

The Shirley Ryan AbilityLab Assistive Technology Program offers a variety of services to help patients accomplish commonplace tasks such as turning on the TV or using a telephone or computer. This type of sophisticated technology affords the user greater independence. For example, if patients have difficulty speaking, alternative communication devices help them express themselves. If manual dexterity is limited, therapists can recommend a variety of tools, including specialized systems that respond to a nod of the head, a breath or the blink of an eye. In FY21, our speech-language pathologists and occupational therapists assisted 620 inpatients and 660 outpatients with their technology needs.

This past September, Shirley Ryan AbilityLab officially opened its newest off-site housing option at the Hyatt Centric Chicago Magnificent Mile. Located two blocks west of the flagship hospital, the Hyatt Centric Chicago Magnificent Mile offers free housing to select Shirley Ryan AbilityLab patients and families traveling from more than 60 miles away. The dedicated floor provides the comforts of home. It includes a washer and dryer on the floor, as well as a microwave, coffee maker and refrigerator in every room.

In FY21, we received 174 international inquiries from 44 countries. We also received 377 inquiries from 47 states and territories and the District of Columbia.

GLOBAL PATIENT SERVICES

Global Patient Services (GPS) helps coordinate care and manage logistics to make it possible for patients from other countries and neighboring states to come to Shirley Ryan AbilityLab for our best-in-class care.

Those who travel long distances from outside Chicagoland often face practical challenges such as finding suitable temporary housing that is convenient, accessible and affordable. Family members were provided with housing that best fit their needs. In FY21, Shirley Ryan AbilityLab provided a “home away from home” for 54 families from 20 states — a combined total of 68 stays.

“We were overwhelmed, but GPS lifted a huge burden so we could focus on our son’s recovery.”

— Narendra, father of Ethan, a pediatric spinal cord injury patient from India

Last year, a rare brain tumor left then four-year-old Maggie unable to hold up her head, sit up or communicate. Now, after a year of physical, occupational and speech therapy at Shirley Ryan AbilityLab, she engages in play, communicates and interacts with songs and books. Maggie’s next step is to start outpatient therapy and enroll in school. Thanks to an Activity Chair paid for by the Anthony Rizzo Family Foundation’s Hope44 Fund, Maggie will take on this new challenge with more independence. The Activity Chair is a customized device that assists with head and posture support, core strengthening, feeding and sensory-based play. It also includes designated space for communication and therapeutic devices. Also, because her Activity Chair is customized, it can be adjusted for Maggie as she grows.
A Day in the Life of Our Art Therapist: Edie

Why would a patient see an art therapist?
The most common reasons are to cope with changes in functioning or hospitalization, process a traumatic event related to a patient’s injury, and/or learn new ways to create art with changes in physical and cognitive abilities — but I think everyone can benefit from art therapy!

Are there any special adaptive tools you or patients use?
Yes. We have a custom wheelchair-accessible loom, an adaptive pottery wheel, adaptive grips for using brushes and other art tools, art-specific communication boards and custom mouth-painting/drawing easels.

How does art therapy differ from other therapies?
Although we have different goals, there are great reciprocal benefits. Art Therapy can be a nonverbal approach to address mental health concerns and emotional wellness.

What’s your favorite part of your job?
I love witnessing patients use their artwork and the creative process to see their own strengths and abilities!
The Donnelley Ethics Program focuses on rehabilitation ethics for patients with disabilities, their families and hospital staff. The program addresses both clinical and research ethics issues, such as decisional capacity, informed consent and refusal, patient autonomy, quality of life, surrogate decision-making and the integration of clinical care and research.

In FY21, program staff engaged in more than 140 consultations, inquiries and debriefs related to ethics issues affecting patients and staff. Consultations encouraged and guided conflict resolution, and explored values and informed decision-making. The program also engaged approximately 2,000 hospital staff members through educational seminars and offerings focused on ethical dilemmas that can arise in delivering healthcare and conducting research, including those unique to COVID-19.

Shirley Ryan AbilityLab continued to make Spiritual Care available for inpatients to meet the variety of spiritual needs that arise after traumatic injury or that can accompany chronic illness. Chaplains of different faiths were available seven days a week to provide inclusive spiritual assessment for 3,503 patients. Encounters included faith counseling, family support and intervention, crisis intervention and grief counseling, Holy Communion, challah and juice, and comfort blankets, among others.

Due to the stress and extraordinary demands related to COVID-19, the Spiritual Care chaplains provided more than 12,555 self-care encounters for staff, which included one-on-one counseling, Blessing of the Hands for Nurses’ Week, relaxation groups and new nurse self-care education.

**CHILD LIFE PROGRAM**
Child Life Specialists are degreed experts in child development who work with patients and families to promote a positive hospital experience. In FY21, the Shirley Ryan AbilityLab Child Life Specialist helped 239 pediatric patients and families cope with hospitalization, diagnosis and treatment. By providing opportunities for play and recreation, education, socialization and self-expression, Child Life programming allows children to understand their environment and gain a sense of control.

This past July, the Shirley Ryan AbilityLab Child Life Program partnered with Chicago’s Museum of Science and Industry to distribute Summer Brain Games to pediatric inpatients. The kits provided hands-on science activities that explored art and health — all promoting summer learning while having fun!

**DONNELLEY ETHICS PROGRAM**

**SPIRITUAL CARE**

Chaplains provided support to 3,503 patients

Gave 239 inpatient kids a chance to play through Child Life activities

Engaged in more than 140 ethics consultations
Thank You

For some, it might be climbing a mountain, for others, it might be climbing the front steps. Ability, on a grand scale or a smaller one, is about blazing toward the finish line — whatever that finish line may be.

Your support and encouragement this past year helped us continue to offer hope to our patients, families and community members.

On behalf of everyone at Shirley Ryan AbilityLab, we are grateful beyond measure for your steadfast trust and belief in our unique mission and vision.

Thank you!