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## A NOTE FROM THE PRESIDENT & CEO



Craig Lambrecht, MD | Logan Health President & CEO

As I write this letter, I reflect back on the extraordinary journey our organization has taken over the past two years. This time in our history will be forever embedded in our personal and collective memories. We witnessed the impact of the pandemic on our community and the ingenuity of our teams — constantly finding creative ways to deliver care.

At the same time, we continued caring for the patients who depend on us, delivering more than 1,200 babies, performing more than 18,000 surgical procedures, treating more than 35,000 patients in our Emergency Departments and providing other essential health care services to our region. We also welcomed three hospitals into our health care family and unified all services and locations under one brand, Logan Health.

I am proud to introduce a new and expanded 2021 Synergies, showcasing the expertise and clinical achievements of our Logan Health care teams. By definition, “synergy” is the result of collaboration between two or more that produces a combined effect greater than the sum of the separate efforts. Within these pages is evidence of the collective work of our medical teams. From innovative diagnostic and treatment services to our team’s community-focused outreach to provide access in rural areas, Logan Health is making a powerful difference in the lives of those who live, work and learn in our region.

As we move into 2022, we do so with pride and the knowledge that our work as an integrated health system has just begun.



## ABOUT LOGAN HEALTH

Logan Health is a nonprofit, **578-bed health system** located in the iconic Flathead Valley of northwest Montana. While the main medical campus is located in Flathead County, Logan Health draws from a total service area **covering 13 counties**, nearly **40,000 square miles** and a **population of more than 600,000**. The health system consists of five hospitals, nearly **50 provider clinics** and a host of other health care services, including the nation's first rural air ambulance service (A.L.E.R.T.), which it has maintained for more than 40 years. More than **4,300 physicians, nurses, health care professionals and support staff** work together to provide patients and their families with a positive, proactive, patient-centered experience. Founded in 1910, Logan Health has provided exceptional care for more than 100 years. Throughout its history, the organization has continued to grow and evolve with the growth and changing needs of the communities it serves.

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### CORE SERVICES

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Cancer Care | Heart & Lung | Neuroscience & Spine  
Orthopedics & Sports Medicine | Surgical Services  
Women's & Children's | Behavioral Health | Primary Care

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The Logan Health system consist of five hospitals. The main medical center campus is located in Kalispell. There are four critical access hospitals located in Whitefish, Cut Bank, Shelby and Conrad.

The health system has specialty care clinics in Kalispell, Columbia Falls, Bozeman, Eureka, Great Falls, Helena, Libby, Missoula, Polson and Whitefish. In addition, more than 80 specialty care providers travel to these and other Montana communities to provide local access to specialty care.



# OUR COMMUNITY BENEFIT

## Fiscal Year 2020

By offering high-quality health care, responding to community needs, and concentrating resources in areas that truly make a difference, Logan Health maintains a rich tradition of providing benefit to the community. Our community benefit effort is a measured approach to meeting identified community health needs, particularly in the vulnerable, uninsured and underserved communities.

Logan Health demonstrates a commitment to promote health, well-being and a caring spirit throughout the community. These activities bring little or no payment to our hospitals, but are sustained because they are valuable to our region and support our mission. As a not-for-profit health care organization, Logan Health is dedicated to improving the health, comfort and lives of the people we serve.

### Cost of Charity Care \$6,206,984

Medical attention to the region's most vulnerable and uninsured means that Logan Health provides care regardless of a patient's ability to pay, insufficient health insurance or whether government-sponsored programs cover the full cost of services. Charity care does not include bad debt.

### Programs and Services \$29,999,990

Logan Health's mission is fulfilled through clinical and support services, health education opportunities, and programs to residents directly within our own communities. We support our community by providing health education events, community clinics, support groups, emergency and trauma services, women's and children's services, hospice and home health services, behavioral health services, and more.

## Government-Sponsored Health Care Shortfalls \$36,850,380

The Medicare and Medicaid programs pay Logan Health less than it costs the organization to provide care to its Medicare and Medicaid patients. The amount shown reflects the actual cost to provide these services above reimbursement.

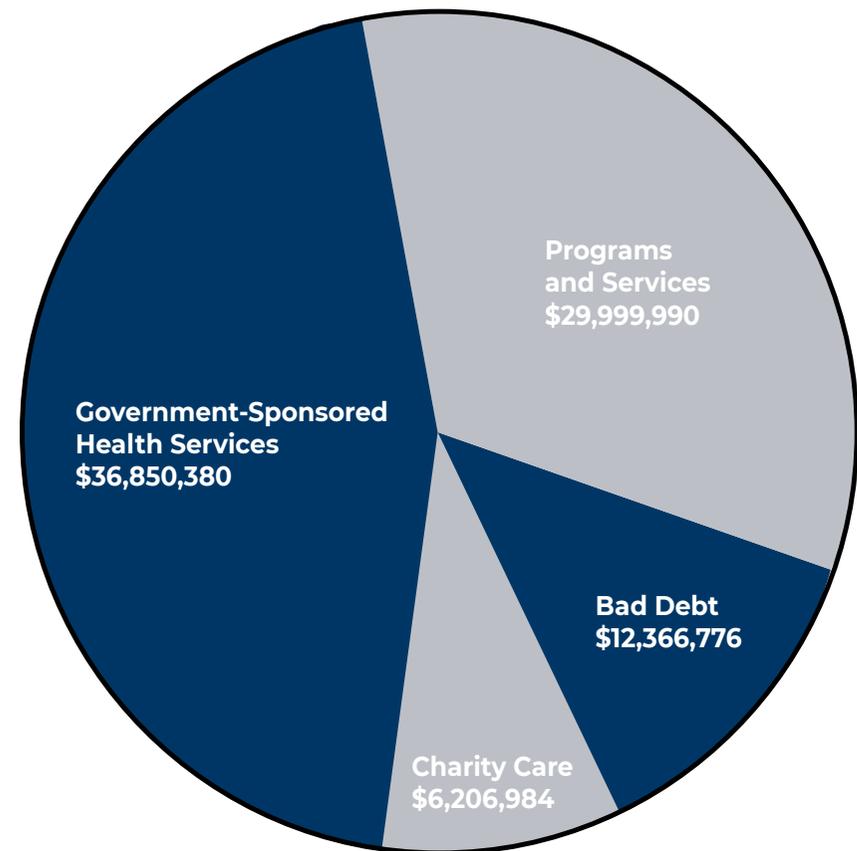
## Bad Debt \$12,366,776

Bad debt is the total cost incurred by Logan Health for services provided to patients who have not paid their bills and who have not demonstrated their inability to pay.

## Total Value to the Community \$85,424,131

While Logan Health, as a not-for-profit service organization, receives local tax exemptions for many of the services we provide, our total community benefit far exceeds the total of those exemptions. In addition, Logan Health and its affiliates currently pay more than \$1.5 million in property taxes and fees to Flathead County for nonexempt services.

## TOTAL BENEFIT TO THE COMMUNITY Fiscal Year 2020



**Total \$85,424,131**

TOGETHER we work to find ways to TREAT those who are sick  
and PROACTIVELY PROTECT the community.



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WORDS FROM OUR PATIENTS

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“I want to extend my greatest thanks and appreciation to the staff at the ER while they were taking care of my medical emergency. The staff members including nurses and ultrasounds techs were very supportive, kind, and thoughtful. I had a lot of fear, pain, and concern with my diagnosis and they were all there to help in any way they could to help lessen my anxiety.”

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# LOGAN HEALTH ACUTE CARE SERVICES

Logan Health's Acute Care program is made up of inpatient services at Logan Health's five hospitals as well as the behavioral health clinics, emergency services, pharmacies, long-term care facilities and laboratories. A unique program in the sense that it touches all facets of patient care and supports all other service lines, acute care is the foundation of the organization.

In the era of COVID-19, acute care staff has taken the lead on the frontlines to ensure proper patient care for patients. We found

ourselves in a unique position as we were tasked with treating a disease that was brand new to the world and therefore didn't have defined guidelines. Together the teams worked to find ways to treat those who were sick and proactively protect the community as best we could. As a result, Logan Health was an early adopter of monoclonal antibody treatments, was on the forefront of the vaccination efforts in Flathead County and treated the cases that required hospitalization.

## ACUTE CARE 2020 STATS

Emergency Department	Laboratory	Behavioral Health
23,212 patient admits	52,396 COVID-19 tests	3,807 clinic visits 7,117 telemedicine visits



## INPATIENT CARE

The backbone of Logan Health is the inpatient units located at all five hospitals and the hospitalists, nurses, practitioners and nursing assistants who staff them. At Logan Health Medical Center in Kalispell, there are 126 adult acute care beds between the units.

The Intensive Care Unit (ICU) is dedicated to patients who have life-threatening injuries and illnesses. These can include but are not limited to, major traumas, respiratory failures, heart failure, stroke, severe bleeding and kidney failure. The Intermediate Care Unit (IMC) is a step-down unit from the ICU. Patients in the IMC require continuous monitoring by their care team. Patients in this area will have continuous pulse-oximetry and telemetry monitoring. It could also include patients needing bi-pap support.

The 2nd West Unit was created in 2019 in what was once the Peds/PICU, to be an extension unit to the IMC. More recently, it has served as a dedicated COVID-19 unit. The Medical Surgical Unit is considered the general population for patients requiring hospitalization stay. Patients here are generally hospitalized for non-life-threatening illnesses, surgeries or testing and observation. The 2nd Surgery Unit is a unit dedicated to patients requiring overnight stays as a result of surgery. Patients generally include orthopedic surgeries and other elective surgeries.

The Oncology unit is a ward that treats patients with cancer requiring them to be hospital-bound.

In addition to Logan Health Medical Center, Logan Health has four critical access hospitals that serve the respective communities of Whitefish with 25 beds, Shelby with 21 beds, Cut Bank with 20 beds and Conrad with 20 beds.

## BEHAVIORAL HEALTH

At Logan Health, the mental wellbeing of patients is equally as important as their physical wellbeing. The behavioral health program offers services to pediatric, adolescent and adult patients and is deeply integrated with patient care throughout the organization. Mental health professionals work hand in hand with primary care and specialty care clinics in Kalispell, Bigfork, Conrad, Lakeside, Polson, and Whitefish to ensure well-rounded health care to their respective patient populations. Mental health professionals specializing in childhood mental wellness have also complimented the newly introduced school-based health program at schools in Bigfork, Columbia Falls, Eureka, Kalispell, Lakeside and Whitefish.

Logan Health Behavioral Health is a 40-bed inpatient facility in Kalispell offering clinically effective treatment through the collaborative efforts of a team that includes psychiatrists, addictionologists, certified licensed addiction counselors, licensed therapists, psychiatric nurses and mental health specialists. We also offer two outpatient clinics in Kalispell: Logan Health Newman Center Adult and Logan Health Newman Center Pediatrics.

Logan Health Behavioral Health Clinic - Whitefish offers outpatient mental health for patients of all ages with a specialty in transcranial magnetic stimulation.



# EMERGENCY SERVICES

Logan Health's Emergency Services include emergency departments in Kalispell, Whitefish, Shelby, Cut Bank, and Conrad as well as the A.L.E.R.T. program, an air ambulance service with a 350-mile radius that transports approximately 350 patients each year.

Logan Health Medical Center's Emergency Department is a 35-bed facility dedicated to treating patients with life-threatening emergencies. The staff of highly trained emergency physicians and nurses treat on average more than 20,000 cases each year. 2021 has been an extremely busy year for the Emergency Department as they've seen record-breaking patient volumes. July 2021 alone saw nearly 3,000 patients, an all-time patient volume record. The facility has also seen record numbers of traumas, peaking again in July 2021 with nearly 30 percent more than in July 2020.

The four critical access hospitals also have emergency services at their facilities, with Whitefish housing 10 beds dedicated to emergency, Cut Bank with four, Conrad with three and Shelby with two.



## PHARMACY

Logan Health has three retail pharmacies under their umbrella, two of which are just off the main campus of Logan Health Medical Center conveniently located near many of the organization's primary care and specialty clinics: Logan Health Pharmacy - Medical Arts and Logan Health Pharmacy - Clinical. The third pharmacy is Logan Health Pharmacy - Columbia Falls.

In addition, hospitals at Logan Health contain inpatient pharmacies to serve patients during their time in the hospital. These compounding pharmacies work in conjunction with prescribing providers to help provide optimal care by custom preparing ingredients or combinations of ingredients for each patient's specific needs.

## LABORATORY

Logan Health has three laboratories located in Kalispell and Whitefish. These labs serve the needs of the hospital inpatients as well as clinics throughout the system. Together, they combine more than a million tests annually and are staffed by pathologists, clinical laboratory scientists, histologists, cytotechnologists, phlebotomists and support staff.

Working in tandem with Mayo Medical Laboratories, Logan Health's laboratories continually provide quality lab testing and excellence in patient satisfaction with services available 24 hours a day, seven days a week. They've also been at the forefront of the COVID testing efforts ever since the onset of the pandemic.

## INPATIENT REHABILITATION

Located on the north side of Logan Health Medical Center, the Logan Health Inpatient Rehabilitation program strives to treat the whole person. A care team consisting of psychiatrists, rehabilitation nurses, physical therapists, occupational therapists, speech pathologists, recreational therapists, social workers, neuropsychologists, clinical dietitians and spiritual care work with patients and their families to teach skills on restoring functional independence in a compassionate atmosphere.

## LONG TERM CARE

Logan Health's Brendan House is a 110-bed long-term care facility on the campus of Logan Health Medical Center meant to provide a home that offers a high level of skilled and rehabilitative care while encouraging active participation in life. The facility is broken down into six pods of roughly twenty residents with similar levels of needs.

Logan Health Care Center - Conrad has a 59-bed nursing home offering 24-hour care and nursing services provided by licensed, certified, and compassionate staff members.

Logan Health Care Center - Shelby has a 32-bed nursing home offering 24-hour care and nursing services.



Bringing EXPERTISE and expanding access to EVIDENCE-based, QUALITY-driven CANCER SERVICES to ALL Montanans resulting in more than 6,000 CANCER SURVIVORS per year.



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WORDS FROM OUR PATIENTS

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“Words can never express my deepest gratitude to all of you. I am truly blessed to have such a fabulous team helping me through my journey. So thankful to be cancer free.”

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# LOGAN HEALTH CANCER SERVICES

The cancer program at Logan Health is certified as a Comprehensive Community Cancer Program from the American College of Surgeons Commission on Cancer (CoC). The breast cancer program is accredited by the National Accreditation for Breast Programs (NAPBC). Board-certified oncology physicians are trained to follow the National Comprehensive Cancer Network (NCCN) guidelines for cancer treatment. Many of the nursing staff have oncology certified nurse designations and all chemotherapy competent nurses hold an Oncology Nursing Society (ONS) Chemotherapy/Immunotherapy Provider card.

In partnership with local providers, the team delivers value-based, high-quality, timely care with a focus on reducing the care costs through the development of highly effective care management systems, optimizing care delivery to patients and ensuring sustainability for the local health care delivery system. The team partners with providers who refer patients for complex interventions to participate in case conferences, care decision-making and opportunities to be present in the procedural suite when caring for their patients.

With more than 125 members of the cancer care team, including 54 specialty care providers and 70 oncology nurses, Logan Health clinicians have a wide range of expertise in caring for cancer patients. The team has expertise in medical hematology-oncology, radiation oncology, surgical oncology, cancer research clinical trials, chemotherapy/immunotherapy, palliative care, cancer support and survivorship, imaging services, infusion services and pharmacy, patient education and resources, genetic counseling and oncology nurse navigators.

Logan Health believes that cancer care is the ultimate team sport. The patient is always the team captain and we are grateful to be their supporting players. We have assembled every specialty needed to provide excellent cancer care without ever having to leave the state. The cancer program continues to seek new growth opportunities to bring our expertise to neighboring communities and expand access to evidence-based, quality-driven cancer services to all Montanans.

## CANCER SERVICES 2020 STATS

	Breast Center	Hematology & Oncology	Radiation Oncology	Palliative Care
Clinic Visits	1,364	6,382	2,180	424
Telemedicine Visits	66	1,167	241	71
Clinic Procedures	5			
Surgical Procedures	186			
Post-Operative Visits	175			
				<b>Total Encounters</b>
				34,846

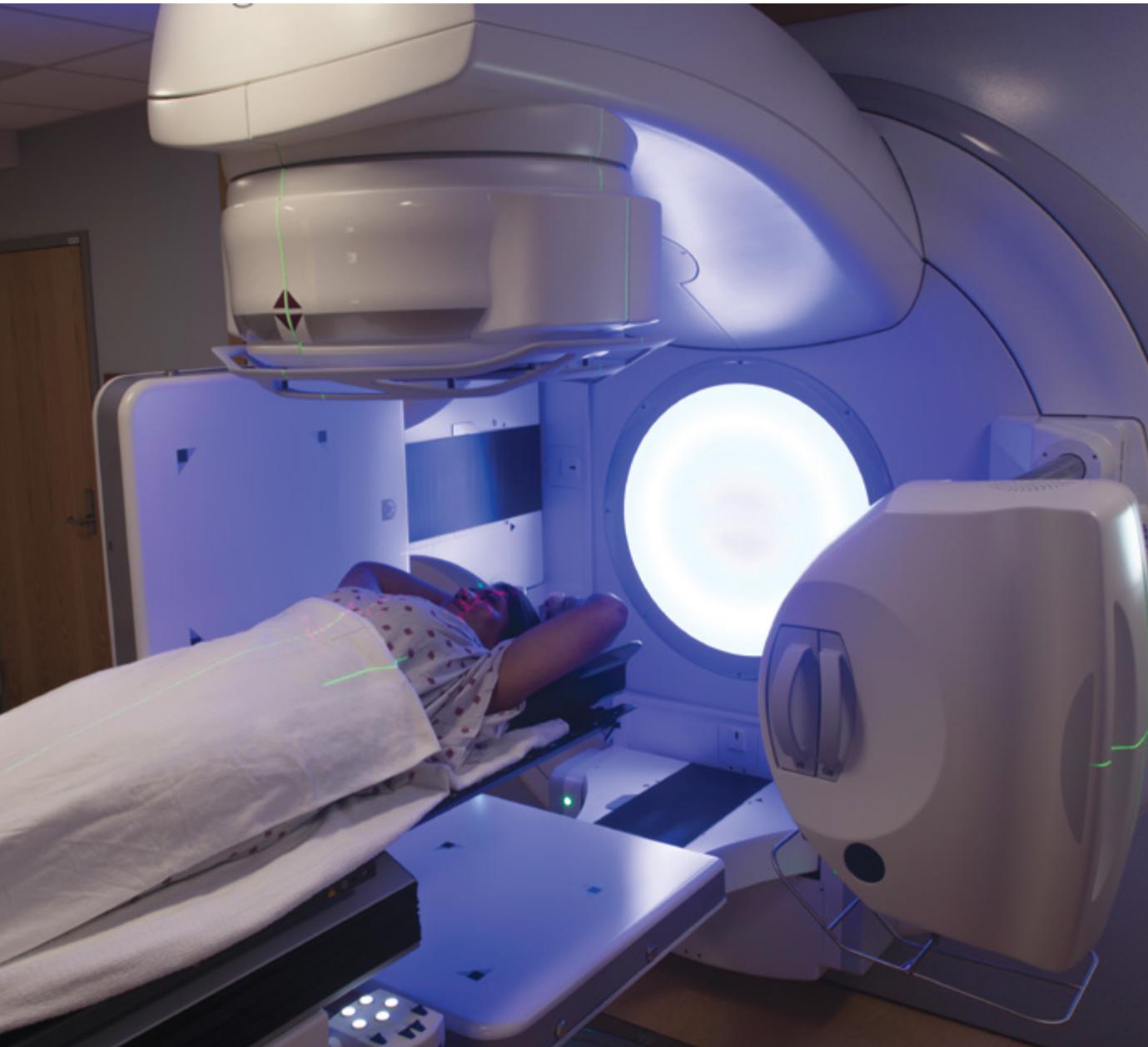
## HEMATOLOGY & ONCOLOGY

Logan Health Hematology & Oncology is the heart of the cancer program, treating various blood disorders and cancer with medical therapy, both oral and infused. The Hematology & Oncology team specializes in the diagnosis and treatment of all varieties of cancers affecting adults. Chemotherapy, bio immunotherapy, hormonal therapy and symptom support are all tailored to each individual to provide the best outcomes and quality of life. Access to new and emerging therapies through participation in clinical trials is also available. Through a team approach, the staff works together with the patient and family to provide timely, trustworthy and truly exceptional care.

The administration of these drugs, or infusion, must be done with incredible accuracy, precision and caution. Logan Health is committed to provider and staff development through local, regional and virtual continuing education and conferences. Many of the nursing staff have oncology certified nurse designations and all chemotherapy competent nurses hold an Oncology Nursing Society chemotherapy/immunotherapy provider card. In addition to being highly educated, the infusion teams are committed to providing support, comfort and compassion through some of the worst days of their patients' lives.

## BREAST CENTER

Breast health is an important aspect of women's health. Many patient's first point of contact with breast care is Women's Imaging, where they receive 3D Mammography™, breast ultrasound, breast MRI and possibly biopsy. The process can be frightening, so we connect patients with our Women's Health Navigator to provide support. It is our hope that the journey ends here, but for patients who require further care our navigator will guide them through the next step—visiting the Breast Center, the hub of the breast health program at Logan Health. Here, our cancer-genetics trained nurse practitioner manages high-risk patients, and our fellowship-trained breast surgeon, treats the full range of benign and cancerous breast diseases. Through collaboration with reconstructive surgeons, we offer a full range of cancer surgeries including mastectomy with immediate reconstruction. The expert staff at the Breast Center ensures patients move seamlessly to the next points of care delivered by other specialists within the cancer program.



## RADIATION ONCOLOGY

Cancer patients frequently need a multifaceted treatment approach that uses all the best tools to fight the disease. To ensure the best possible outcome, a team approach requires collaboration and coordination among all the specialists on a patient's treatment team. Logan Health Radiation Oncology is a key player in the cancer services team. Logan Health employs two radiation oncology physicians, one nurse practitioner and a whole team of radiation therapists to safely administer radiation therapy. Radiation therapy is used to try to cure cancer, control the growth of cancer or relieve symptoms such as pain. Treatment involves the controlled application of radiation to cancers anywhere in the body. After radiation therapy is completed many patients return to radiation oncology for follow-ups and surveillance, or are referred back to other oncologists to continue fighting the disease.

## GENETIC COUNSELING

Genetics is the process of helping individuals understand and adapt to the medical, psychological and familial implications of genetic contributions to disease in order to help them make informed decisions about their health care. Logan Health's genetic counselors offer genetic counseling services that are centered on possible hereditary susceptibilities to cancer and other diseases or conditions.

With genetic counseling, either in person or via telemedicine, the team helps patients with counseling services centered on possible hereditary susceptibilities to cancer and other diseases or conditions. Access to genetic counseling allows Logan Health's providers to make appropriate recommendations for genetic testing and diagnosis. This gives patients increased knowledge for themselves and family members about their risk for certain diseases or genetic conditions, as well as insight into why a disease or condition may have occurred. Patients are then able to incorporate personalized and preventive management options, leading to physiological benefits like decreased anxiety and uncertainty.

## PALLIATIVE CARE

Logan Health Palliative Medicine offers comprehensive, interdisciplinary care for patients with complex illness. The palliative medicine team assists a patient and his/her family in understanding the medical situation, exploring prognostic awareness, and clarifying medical decision-making and patient-aligned goals of care.

Expert symptom management is a key of palliative medicine – whether for pain or non-pain symptoms – as is patient/family emotional and social support. Unlike hospice, patients may be pursuing treatments anywhere along the spectrum of care, from desiring all aggressive and curative interventions, to comfort-focused interventions only. Assistance in advance care planning and communication with other providers and interdisciplinary team members is provided.

## SYMPTOM SUPPORT

The goal is to provide cancer patients with convenient care when they start having symptoms related to cancer treatment. Logan Health's symptom support program is a collaborative clinic where patients are evaluated over the phone by a triage nurse. Depending on the severity, the nurses will make an appointment for the patient with one of our advanced practice clinician's (APCs) who have years of experience in oncology, hematology and with side effects of chemotherapy. The APCs collaborate very closely with the patient's main doctor to ensure a high level of care continuity and efficacy.

The Symptom Support Clinic is able to treat a range of symptoms in order to provide comfort and relief to Logan Health's cancer patients. Patients may be seen for fever, chills, nausea, vomiting, diarrhea, shortness of breath, generalized fatigue, or decreased appetite, to name a few.

## CANCER SUPPORT & SURVIVORSHIP

Logan Health's Cancer Support & Survivorship program provides a full range of support services for youth and adults affected by cancer. It takes a community to build a place for people affected by cancer. All programs are offered free of charge and we count on working with the community as donors and volunteers to implement this important work. A variety of programs are offered including mental health services through a licensed clinical social worker, educational classes on a variety of topics, social connections and community building, and support for maintaining a healthy lifestyle.

## CLINICAL RESEARCH

Logan Health's Research team conducts pharmaceutical, device and registry trials in oncology, cardiology, pulmonology, rheumatology, endocrinology, gastroenterology, pediatrics and COVID-19.

Logan Health Research works with local and central International Review Boards and have been awarded recognition for meeting and exceeding enrollment expectations of sponsors and for high-quality care and data collection. The team can offer ongoing educational opportunities to the collaborative care team to ensure research compliance and research best practice. Logan Health Research's mission is to offer cutting-edge treatment to patients in our community through clinical trials, while also benefiting society through the advancement of health care.

COMPREHENSIVE, QUALITY-DRIVEN care models CONSISTENTLY earn AWARDS and RECOGNITION for the treatment of HEART, LUNG & VASCULAR diseases.



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WORDS FROM OUR PATIENTS

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“I am in grateful debt for the experience of my absolutely irreplaceable husband of 40 years. I am floored at the level of care that he received. To us, you were more than a bunch of employees doing their jobs. You were everything we needed.”

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# LOGAN HEALTH HEART, LUNG & VASCULAR SERVICES

Logan Health’s Heart, Lung & Vascular program works daily to provide support and guidance to lead patients down the road to recovery. By employing comprehensive, quality-driven care models, a team of more than fifty providers consistently earn awards and recognition for the care of heart, lung and vascular diseases. Encompassing all programs aimed at heart, lung, vascular, and sleep health, as well as all of imaging and radiology, the Heart, Lung & Vascular program collaborates and integrates with all service lines at Logan Health to provide excellent, well-rounded care. The program has outreach clinics in Polson, Ronan, Libby, Eureka, Columbia Falls, Conrad, Cut Bank, Shelby, and Plains to increase access. Telehealth consulting and appointments are provided to all parts of Montana.

In 2020, the Heart, Lung & Vascular service line doubled down on the mission to fight the global pandemic. Leveraging the program’s well-established network, Logan Health supported our patients, communities and other health care organizations in the prevention, treatment and long-term health management of coronavirus. However, assisting in the fight against the pandemic was not the Heart, Lung & Vascular program’s only accomplishment in 2020 – they also received multiple achievement awards from the American Heart Association for heart failure, heart attack and stroke treatment and platinum site designation from the American College of Cardiologists.

## HEART, LUNG & VASCULAR 2020 STATS

	Clinic Visits	Telemedicine Visits	Clinic Procedures	Surgical Procedures	Total Encounters
Cardiology	15,893	1,492	1,342	257	18,937
Electrophysiology	1,525	276	311	n/a	2,112
Pulmonology	7,370	1,840	n/a	n/a	9,425
<b>CONSOLIDATED VOLUMES</b>	<b>24,788</b>	<b>3,608</b>	<b>1,654</b>	<b>282</b>	<b>30,756</b>

## CARDIOLOGY

Heart disease is the number one cause of death in Montana and the nation. Every day, Logan Health works to keep the communities' hearts beating strong. Through prevention, treatment and rehabilitation, we're helping cardiac patients in our region achieve a rewarding quality of life while controlling the negative effects of heart disease.

Logan Health is committed to providing comprehensive state-of-the-art cardiology care and treatment to our patients. Our forward-thinking providers and other clinical leaders seek to be early adopters of new technology and treatments to stay on the cutting edge of best care and practices. These efforts have awarded us national recognition through the American College of Cardiologists, The American Heart Association, earning Logan Health a place on the US News top hospital listings.

## ELECTROPHYSIOLOGY

Logan Health has electrophysiology specialists dedicated to the diagnosis and treatment of abnormal heartbeats or arrhythmias. Electrophysiological testing uses catheters inserted into the heart to find out where abnormal heartbeats are coming from and the best option for treating the arrhythmia. Logan Health's electrophysiology team specializes in loop recorders, pacemakers, cardiac defibrillators, biventricular devices, left atrial appendage occlusions, simple cardiac rhythm ablations, and complex cardiac ablation procedures.

## CARDIOTHORACIC SURGERY

While many heart conditions are now able to be treated in a minimally invasive way, there are still circumstances that require surgery. At Logan Health, patients can rest assured that if they or a loved one needs heart surgery, they will receive award-winning care from our team of cardiac surgery specialists. The Logan Health surgical team works closely with all other cardiology specialists to determine the best possible care plan for each patient's specific needs, including coronary artery bypass surgery, off-pump coronary artery bypass surgery, valve repairs and valve replacement surgeries.



## INTERVENTIONAL & STRUCTURAL CARDIOLOGY

Interventional and structural cardiology is a new, advancing field of heart procedures that can make targeted changes to the function of the heart. These treatments are aimed at either returning the flow of blood to an area of the heart or to changing the structure of the heart by replacing valves or correcting flaws that are newly formed or congenital.

The Logan Health cardiology team can treat multiple kinds of heart attacks and blockages using interventional cardiology procedures like Impella, a variety of percutaneous coronary interventions, primary radial access approach, rotational atherectomy and intracoronary lithotri. Fellowship-trained structural heart physicians perform multiple procedures to correct the physical problems within the heart. Logan Health currently offers TAVR, MARV, TMVR, tricuspid valve-in-valve, MitraClip, LAAO/Watchman, PFO/ASD/VSD Closures, para-valvular leak and pseudoaneurysm closures.

## SLEEP MEDICINE

Logan Health Sleep Medicine offers various locations, including full-service and accredited Sleep Labs in Kalispell, Whitefish and Shelby for diagnosing and treating patients with sleep-related disorders. These conditions include difficulties falling or staying asleep, breathing problems during sleep, daytime sleepiness and other abnormal nighttime occurrences.

Hypertension, electrical heart rhythm disturbances, coronary artery disease, congestive heart failure and pulmonary hypertension are just some of the conditions that have been associated with sleep apnea. Since treatment of sleep apnea can increase survival and improve quality of life, offering complete diagnostic and treatment services, including sleep medicine, is essential to Logan Health Heart, Lung & Vascular's goal of becoming a fully comprehensive cardiac and pulmonary medicine destination.





## PULMONOLOGY & CRITICAL CARE

Logan Health is proud to have a strong, growing team of pulmonologists and critical care doctors who are tasked with seeing patients in the ambulatory, clinical setting, as well as in the medical center's intensive care unit.

At Logan Health Heart & Lung, the pulmonology department manages all manners of lung disease. With in-office diagnostic tools like pulmonary function testing, patients experience a seamless care delivery model.

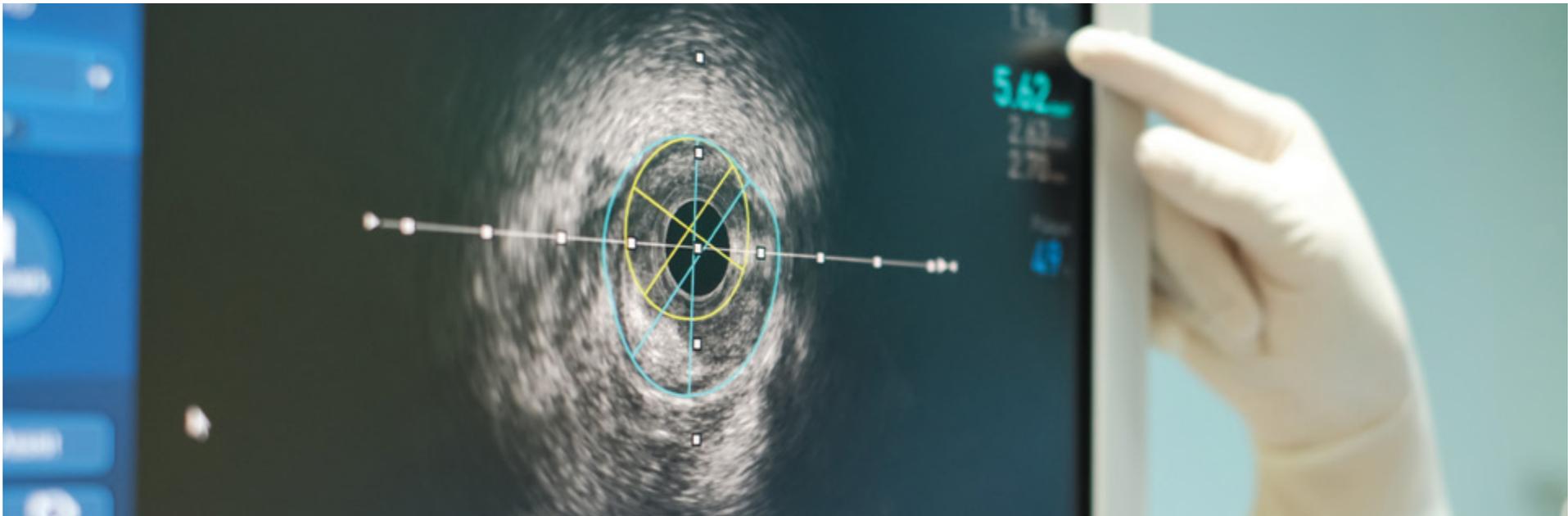
Logan Health Medical Center patients have 24/7 access to fellowship-trained, highly experienced critical care physicians when they need them most. Our team of pulmonary/critical care physicians participates in case conferences and collaborative care of complex patients throughout the Logan Health system. Sharing their expertise in taking care of our complex post-procedure patients supports a vision of collaborative best practices and guideline-based care delivery.

## IMAGING

Logan Health offers modern diagnostic imaging services including 3T MRI and 64-Slice CT Scanner. The goal of diagnostic imaging is to provide the physician with more information about conditions by generating images of the inside of the body. Along with sophisticated equipment, patient comfort, care and convenience are top priorities. Our partnerships with the world's premier diagnostic equipment manufacturers give us the ability to make superior technology available to patients throughout our region. Our capabilities include x-ray, MRI, MRA, CT, Coronary CT Angiography, ultrasound, nuclear medicine, mammography,

dual-energy x-ray absorptiometry, PET and interventional radiology procedures.

Logan Health recognizes that quality, consistent imaging is at the core of health care. Investing in technology is key to providing value-based care to patients and our investment isn't limited to Logan Health locations. Through the generous support of our donors, Logan Health has three mobile imaging units that travel throughout rural Montana to provide imaging services to remote communities.



## CARDIOPULMONARY REHABILITATION

Being able to treat the conditions our patients are inflicted with is only part of the battle. Many patients of the Heart, Lung & Vascular program have long-term health consequences that are secondary to their actual condition. For example, after receiving excellent care after a heart attack, where the provider is able to clear the heart's blockages and return function to a more normal state – the patient still has to work back their physical health. That's why

at Logan Health, we have put in place an excellent rehabilitation program specifically for heart, lung and vascular patients. Patients work closely with therapists to recover their day-to-day functions and regain the ability to exercise. This program helps patients recover, but also avoid having a second cardiac event that could have worse outcomes.

## WOUND CARE

Our dedicated team of specially trained clinicians use advanced clinical tools in wound healing. About five million Americans experience chronic wounds caused by diabetes, circulatory problems and many other conditions. At the Logan Health Wound Care, a team of clinicians specializing in acute and chronic wounds help patients manage pressure injuries, vascular ulcers, arterial ulcers, neuropathic ulcers, draining ulcers, traumatic wounds, diabetic non-healing wounds. Our team also provides prevention strategies for wounds and professional consultation for physicians to help them manage their patient's wound needs.

Logan Health Wound Care also provides assistance for patients undergoing ostomy surgeries. These patients require intensive physical and emotional care and support as they return to their normal lives. Nurses specializing in the care of ostomies are available to facilitate positive outcomes for patients with colostomies, ileostomies, urinary diversions, continent diversions, pre-operative and post-operative education, post-operative discharge and follow-up, treatment/prevention of skin complications, stoma site marking, fistulas and tubes.

ADVANCED and COMPREHENSIVE  
NEUROSCIENCE care and education for MONTANA.



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WORDS FROM OUR PATIENTS

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“Were it not for the clinical excellence and wonderful chair-side manner, I would no longer be alive. Every visit, every telephone call, every interaction with a team member has been positive. Every one of these people consistently demonstrates genuine caring along with remarkable clinical competence. This clinic is truly amazing.”

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# LOGAN HEALTH NEUROSCIENCE & SPINE SERVICES

Since its inception, the Neuroscience & Spine program has been focused on its mission: To provide advanced and comprehensive tertiary clinical neuroscience care and education for the people of Montana.

Logan Health's Neuroscience & Spine program consists of the departments of Neurology, Neurological Surgery, Physical Medicine & Rehab, and Wellness & Pain Management. The program represents the single largest integrated neuroscience clinical enterprise in Montana consisting of 35 clinicians with subspecialty training in the clinical neurosciences supported by 55 staff and administration.

The program is vertically and horizontally integrated into the health care system with robust interactions with cancer, radiation oncology, otolaryngology, endocrinology, orthopedics, trauma, radiology, pediatrics, emergency services, primary care and critical care services. These integrations lead to comprehensive

and multidisciplinary programs in brain tumors, spinal disorders, functional and degenerative neurological diseases, neuro-restorative programs, brain injury (both interdiction and recovery), pediatric neurological disorders and a comprehensive stroke program.

To enhance access, the program has outreach clinics in Libby, Eureka, Whitefish, Plains, Polson, Missoula, Cut Bank, Great Falls, Helena, and Bozeman. Key technologies support the clinical mission including: Functional MRI, three Tesla MRI, PET scan, intraoperative surgical navigation, intraoperative surgical imaging, and intraoperative and inpatient EEG monitoring.

Accommodating the neuroscience patient populations are facilities tailored to patient needs: Logan Health Children's, a dedicated inpatient rehabilitation center, critical care unit, intermediate care unit, dedicated neuroscience inpatient floor, and skilled nursing facility.

## NEUROSCIENCE & SPINE 2020 STATS

	Clinic Visits	Telemedicine Visits	Clinic Procedures	Surgical Procedures	Post-Operative Visits	Total Encounters
Neurological Surgery	3,875	774	127	602	541	5,915
Neurology	4,518	2,251	2,412	n/a	n/a	9,181
Physical Medicine & Rehab	2,950	839	545	n/a	n/a	4,334
Wellness & Pain Management	11,703	3,922	n/a	n/a	40	15,665
<b>CONSOLIDATED VOLUMES</b>	<b>23,046</b>	<b>7,822</b>	<b>3,084</b>	<b>602</b>	<b>581</b>	<b>35,095</b>

## NEUROLOGY

Logan Health Neurology provides both adult and pediatric, inpatient and outpatient, general and subspecialty services. Subspecialty services are provided in imaging, neurophysiology, cerebrovascular disease, headache, neuromuscular disorders and degenerative disease, demyelinating diseases, epilepsy, dementia, and pediatrics. The pediatric neurology group represents the only pediatric neurology providers in Montana. The neurology department, in collaboration with emergency services, hospitalists and neurological surgery, spearheads the Joint Commission, American Stroke Association Primary Stroke Center offering telestroke services to ten outreach sites. Expanding on this theme, telemedicine consultations are provided to affiliated hospital sites, making neurology consultations available throughout Montana.

The department has an active neurophysiology section providing EMG and EEG services. On the inpatient side, the advanced EEG system allows us to provide 24-hour continuous EEG monitoring. The department also offers interventional Botulinum Toxin (BOTOX) treatments for headache, hemifacial spasm, and dystonia. The department provides a rotation in clinical neurology for medical students from the University of Washington.





## NEUROLOGICAL SURGERY

Logan Health Neurological Surgery offers comprehensive neurosurgical care, intervention and education across the spectrum of neurosurgery: trauma/critical care; spine/peripheral nerve; neuro-oncology, pediatrics, functional and cerebrovascular. The department provides the only 24/7/365 pediatric neurosurgical service in Montana. The functional service provides intervention for movement disorders (Parkinson's disease), pain, spasticity, and epilepsy. Partnering with the departments of Physical Medicine & Rehab and Wellness & Pain Management, the neurosurgical department spearheads a comprehensive spine program providing both minimally and open surgical intervention for spinal disorders of the cervical, thoracic and lumbar spine for trauma, tumor, degenerative and infectious disorders.

Our neuro-oncology program consists of multimodality treatment options for patients with both primary and metastatic tumors of the brain, spine and peripheral nervous system. The program combines techniques, technologies, experience and talent to tailor treatment to patients and pathology. Both open and endoscopic techniques are brought to bear in combination with intraoperative surgical therapeutics. When appropriate, in combination with radiation oncology, oncological processes are treated with combinations of stereotactic radiosurgery and therapy. A robust tumor review board optimizes individual treatment options. To date more than 500 patients have had neurosurgical intervention since inception.

The department represents the surgical arm of the primary stroke center. Critical to the health system mission, the neurosurgical department covers both pediatric and adult neurological emergency services including brain and spine trauma, hemorrhagic and ischemic stroke and hydrocephalus. Logan health is also a medical tourism destination for the treatment of degenerative spinal disorders. Our educational mission is comprised of ongoing case conferences, a tumor board, and outreach educational venues covering such topics as neuro-oncology, pediatric neurosurgery, movement disorders and spinal neurosurgery. We provide annual training in emergency neurological life support, and an annual Neurosurgical Boot Camp for advanced practice providers with 270 attendees from 40 states. The Peter M. Sorini, MD, Educational Endowment provides a summer intern an experience in the clinical neurosciences. This year, we hosted the 2021 Annual Meeting of the Society of University Neurosurgeons representing the first non-academic center to do so in the society's 56 years. Logan Health aspires to be the destination for neurological education in Montana.

## PHYSICAL MEDICINE & REHAB

Logan Health Physical Medicine & Rehab provides the only Commission on Accreditation of Rehabilitation Facilities (CARF) in western Montana. Its subspecialty accreditation in stroke rehabilitation assures restorative care for our patients who have suffered a stroke improving and optimizing their functional outcomes. Outpatient services assure continuity of care and recovery. Outpatient programs are focused on the particular needs of our community:

**The Save the Brain program for concussion and traumatic brain injury:** This program provides education, interdiction and recovery therapies for patients with traumatic brain injuries. A significant component of the program has been focused on athletes, providing training for school nurses, athletic trainers and primary care physicians. Save the Brain has worked with local and regional high schools to establish return-to-play and return-to-learn protocols.

**Spine:** A large focus of Physical Medicine & Rehab is spinal disorders. The department manages the spine resource clinic which evaluates, triages, and treats patients with spinal disorders.

Additionally, there are programs for the management of compression fractures and evaluation and conservative treatment of scoliosis.

**Spinal Cord Injury:** Physical Medicine & Rehab provides a comprehensive evaluation for patients with spinal cord injury. This service covers the spectrum of patient needs from the management of spasticity and dystonia utilizing BOTOX, to the correct fitting of prostheses and wheelchairs to optimize independence and reduce complications.

A unique aspect of the department is the amputee care and bracing needs. This provides care for patients with prosthetic and orthotic needs through a multidisciplinary clinic which includes prosthetists, orthotists, and physical therapists. Gait analysis and correction are provided.

Physical Medicine & Rehab also offers comprehensive diagnostic and therapeutic interventions including EMG/NCS and ultrasound -guided injection therapies for pain, spasticity and dystonia.



## WELLNESS & PAIN MANAGEMENT

Logan Health Wellness & Pain Management is among the most comprehensive programs of this type in the country, providing innovative approaches to both acute and chronic pain syndromes. Housed within the interdisciplinary walls of the center are specialists in the fields of interventional pain management, musculoskeletal osteopathic manipulative treatment, chiropractic care, acupuncture, physical therapy, mental/behavioral health, and addiction medicine.

An integral part of the center's model is the EMPOWER program. This program educates and motivates patients to participate in a personalized program that utilizes a mix of treatment options. A psychologist and patient navigator work with the patient to develop an understanding of how to reach their goals by utilizing tools that address the biological, psychological, and social components of pain. This program has been proven to improve outcomes while reducing utilization of potentially dangerous medications.

Providing a FULL SPECTRUM of  
MUSCULOSKELETAL CARE for ALL AGES.



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WORDS FROM OUR PATIENTS

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“I am very grateful for the orthopedic team for the competent, caring and professional care given. They work hard in a personal, caring way to help me reach my treatment goals.”

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# LOGAN HEALTH ORTHOPEDICS & SPORTS MEDICINE SERVICES

The Logan Health Orthopedics program is comprised of a full scope of services including orthopedics and sports medicine, rehabilitation, rheumatology, youth development, and the medical fitness center. The team works closely with patients rehabilitating from conditions such as stroke, concussion, sports injury and traumatic injury and collaborates closely with pediatric, neuroscience and spine, and surgical services. The Orthopedic & Sports Medicine surgical teams are highly-skilled, fellowship-trained specialists. They are experienced using state of the art technological procedures such as Mako robotic-arm assisted total joint replacement, and advanced arthroscopic techniques for hip, knee, shoulder, elbow, wrist, and ankle surgery. Such expertise has enabled the advancement of same-day discharge procedures, faster recovery and improvements in quality outcomes.

To meet the orthopedic needs of a growing region, service locations have expanded to include clinics in Kalispell, Whitefish, Columbia Falls, Eureka, Libby, Cut Bank, Shelby, Lakeside, and

Polson. Surgical facilities include Logan Health – Whitefish, Logan Health Medical Center and Logan Health Surgery Center. In addition, the medical tourism department has aimed to increase access to care for those across the border. In most cases, patients can be seen for care within four weeks, allowing individuals to move forward with either treatment or recovery. The consolidated volumes of the Orthopedic & Sports Medicine program includes more than 48,000 annual patient visits and 4,740 surgical procedures.

The mission of Logan Health Orthopedics & Sports Medicine is to provide a full spectrum of musculoskeletal care for all ages with support for pediatrics, high school sports, active adults and seniors. The team aspires to the highest standards of orthopedic care while integrating services and treating patients along a continuum of care throughout the patient pathway.

## ORTHOPEDICS & SPORTS MEDICINE 2020 STATS

Clinic Visits	Walk-In Visits	Telemedicine Visits	Clinic Procedures	Surgical Procedures	Post-Operative Visits	Total Encounters
40,585	501	2,165	499	4,740	5,130	53,620

## ORTHOPEDICS & SPORTS MEDICINE

Logan Health Orthopedics & Sports Medicine has board-certified, fellowship-trained surgeons who provide a broad spectrum of comprehensive orthopedic specialty care. Visiting pediatric surgeons in cooperation with Logan Health Children's further broaden the scope of care. The subspecialists provide care for hand, foot and ankle, sports medicine and total joint reconstruction conditions. Sports medicine, in cooperation with youth development, has expanded its community-focused service through the placement of athletic trainers in schools and physician coverage during high school sports. The comprehensive total joint program is patient-centered and tailored to provide proper education, support and guidance for patients through joint replacement surgery. Alongside surgeons works an

experienced team of orthopedic professionals, including physical and occupational therapists, nurses and physician assistants whose goal is provide exceptional care. The program coordinates with surgical services and the newly opened pre-anesthesia clinic to facilitate a smooth transition from surgery to recovery. Utilizing robotics, specifically Mako (Stryker), has also aided in successful patient outcomes and quick recovery. Logan Health Medical Center ranked in the top five percent nationwide for overall low surgical complication rates in Total Hip Arthroplasty procedures (ACS NSQIP 2020 morbidity data). At Logan Health more than 1000 joint surgeries are performed per year with a focus on joint preservation with hip arthroscopy cartilage transplant.





## REHABILITATION

Logan Health Rehabilitation provides comprehensive physical therapy, occupational therapy and speech therapy services with a goal to empower patients toward maximum independence, with a self-managed program promoting continued health and well-being. Skilled physical therapists work with patients to improve mobility, reduce pain, and enhance independence and quality of life. Physical therapy specialties include women's health, orthopedics, neurology, headache, spine, and geriatrics.

Experienced speech-language pathologists guide patients through communication techniques, speech barriers and swallowing difficulties. Highly qualified occupational therapists help patients regain independence and enjoy meaningful activities. The team works in close communication with the neuroscience concussion clinic doctors to return patients to school, work and sports within the optimal recommended time frame, and employs leading therapeutic techniques such as Dynavision D2, 2000 Series Cockpit Driving Simulator, VitalStim, Biodex Balance System SD, and Bioness.

## RHEUMATOLOGY

Logan Health Rheumatology has a growing team of dedicated, highly-trained specialists. Rheumatology works closely to coordinate patient care with orthopedics, primary care and wellness and pain management. Along with active recruitment, and utilization of telemedicine, this multidisciplinary approach to patient care has been key to improving access to specialty services.



## YOUTH DEVELOPMENT

The Youth Development mission is to provide multi-disciplinary, highly trained staff to enable all youth to have an active and healthy lifestyle. The team fosters lifelong success through individualized plans that include body knowledge, performance training, injury prevention, safety screenings for concussions, recovery-to-play protocol and nutrition. In essence, the youth development program centers around the philosophy that “exercise is medicine”. This past year, the Youth Development program screened more than 1,100 student-athletes for baseline concussion testing. As part of a commitment to the region’s families and children, Logan Health’s Youth Development program provides certified athletic trainers at every community-sporting event as well as within most public schools. The Youth Development program also purchased 20 medical-grade AEDs to be provided to local schools and used by our athletic trainers. These have proven to be necessary, life-saving devices to have on hand at every athletic event.

## MEDICAL FITNESS CENTER

Logan Health Medical Fitness Center takes pride in serving people of all ages and medical backgrounds. With three facilities in Kalispell, Polson and Lakeside, there is plenty of room for anybody to find their place. In addition to a complete weight training area and more than 75 pieces of cardio equipment, Kalispell's fitness center also offers an indoor track, regulation-sized gymnasium, pool, spa, separate steam rooms and saunas for men and women, aerobic studios, racquetball court, tennis courts, group cycling area, rock climbing wall, turf workout area, and stretching area. Logan Health Medical Fitness Center offers medically-integrated programs led by highly credentialed staff. Programs such as physical, occupational and speech therapy, as well as cardiac and pulmonary rehabilitation, are offered within the facility. For members, programs including recreation leagues, wellness coaching, personal training and an Exercise & Sports Science Center are available. There is also a wide variety of children’s lessons, camps and programs. The fitness center seeks to progress both as a facility and a community partner by meeting the recreational needs of the community.



Delivering INTEGRATED, ACCESSIBLE health care that addresses the patient's OVERALL HEALTH needs



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WORDS FROM OUR PATIENTS

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“I was a walk-in to have an x-ray and be evaluated for a possible foot fracture. Considering I was not scheduled, everyone was patient, professional and friendly. The staff were great considering it was the end of the day and everyone was probably looking forward to going home.”

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# LOGAN HEALTH PRIMARY CARE SERVICES

Primary care is the delivery of integrated, accessible health care that addresses the patient's overall health needs. As clinicians, primary care providers are not limited to focusing on one specialty, but instead are expert big picture thinkers. Logan Health's primary care providers form long-lasting relationships with patients that allow us to best track changes in their health, but also give us the opportunity to know them personally and

advocate for them in ways that align with their values. Services within the primary care service line include primary care, walk-in care, school-based health centers, nephrology, infectious disease, endocrinology, diabetes education and prevention, dietitian and nutritionist services, occupational medicine, home care, and hospice.

## PRIMARY CARE 2020 STATS

	Clinic Visits	Telemedicine	Walk-In Visits	Procedures	Total Encounters
Primary Care	76,612	3,299	29,967	660	110,538
Renal	1,263	335	n/a	n/a	1,598
Endocrinology & Infectious Disease	3,509	1,772	n/a	24	5,305
<b>CONSOLIDATED VOLUMES</b>	<b>81,384</b>	<b>5,406</b>	<b>29,967</b>	<b>684</b>	<b>117,441</b>

## PRIMARY CARE

At Logan Health, our patients benefit from the expertise of more than 70 primary care providers, a growing number of specialty providers with whom they are able to consult, and also have in-clinic access to mental health professionals, dietitians, pharmacists and diabetes educators. Logan Health currently operates 13 primary care clinics located throughout Montana in Kalispell, Bigfork, Lakeside, Polson, Columbia Falls, Eureka, Conrad, and Cut Bank and employs providers who specialize in family or internal medicine as physicians, doctors, physician assistants and nurse practitioners.

## WALK-IN CARE

Logan Health currently operates five walk-in clinics in Kalispell, Whitefish, West Glacier, and Polson. Whatever the cause for visiting, Logan Health has a team of experts ready to handle the situation and get patients back to enjoying all that Montana has to offer. In 2020, our walk-in care team stepped up to the front lines of the COVID-19 pandemic. Our teams stood up respiratory clinics to triage patients and assess them for coronavirus infections.





## SCHOOL-BASED HEALTH CENTERS

Logan Health's school-based health centers are similar to primary care offices, providing preventive, acute, chronic and mental health care in order to complement the services a family doctor provides and to help those who do not have a primary care provider. Prior to 2020, the school-based health program was operational at Columbia Falls schools and at Eureka schools through Logan Health – Whitefish. This year Logan Health opened new School-Based Health Centers at Cayuse Prairie School, Lakeside Elementary School, Somers Middle School and Bigfork Schools.

## INFECTIOUS DISEASE

In 2020, all of us turned our attention toward these types of specialists to help us understand how we identify, avoid and treat COVID-19. Logan Health and the communities we serve greatly benefited from the expertise of an infectious disease specialist, who calmly and expertly guided us through the pandemic. He played an integral role in the development of protocols used to keep patients, visitors and staff safe, not only at Logan Health's medical centers, but also to many other critical access hospitals in our surrounding areas.

## NEPHROLOGY

Logan Health Nephrology has served northwest Montana since 1972, providing comprehensive management of kidney disease and hypertension by experienced, board-certified nephrologists. One of our nephrologists serves as the medical director of the four dialysis units in the northwest part of Montana. Our nephrologists do outreach in Eureka, Libby, Browning and Polson.

This year Logan Health Nephrology played an integral role in the fight against COVID. Research suggests that up to half of the people hospitalized with COVID-19 get an acute kidney injury, which can lead to serious illness, dialysis and even death. At Logan Health, nephrologists make regular rounds on COVID patients to closely monitor their kidneys and administer interventions, like continuous renal replacement therapy, as needed.

## ENDOCRINOLOGY

Because hormones influence many essential processes, you also find them at the root of some of the most prolific diseases in mankind; like diabetes, appetite and obesity, bone problems and cancer. Endocrinologists are medical providers who specialize in diagnosing and treating diseases related to hormones. Logan Health currently employs three endocrinologists. Logan Health Endocrinology's main practice is in Kalispell, but services are available in the outreach settings in Eureka, Great Falls, and Polson.

## DIETITIAN & NUTRITIONIST SERVICES

According to the CDC, in Montana alone, nearly 76,000 people have diagnosed diabetes, 24,000 people have diabetes that is undiagnosed, and about 282,000 people have prediabetes. This means that nearly half of Montanans are affected by diabetes personally. To address that level of potential risk in northwest Montana, Logan Health's Diabetes Education & Prevention program specializes in self-management, education and lifestyle coaching, empowering individuals to take control of diabetes or, if at risk, to prevent diabetes. We bring together certified diabetes educators, registered dietitians and registered nurses who work together to help people with diabetes manage the disease and to help those at risk prevent diabetes. Logan Health Diabetes Education & Prevention offers diabetes self-management education, diabetes prevention classes, insulin pump therapy, continuous glucose monitoring, diabetes support groups, gestational diabetes education, community service presentations, and telehealth diabetes education and prevention services.

## OCCUPATIONAL MEDICINE

Our dedicated team of physicians, nurse practitioners, therapists, nurses and case managers has been ensuring the safety of workers and helping you maximize workplace volumes since 1991. Logan Health Occupational Medicine works with employers and employees throughout the Flathead Valley to provide pre-employment screening, physicals, fitness for duty exams, on-the-job injury support, and drug and alcohol testing.

## HOME CARE

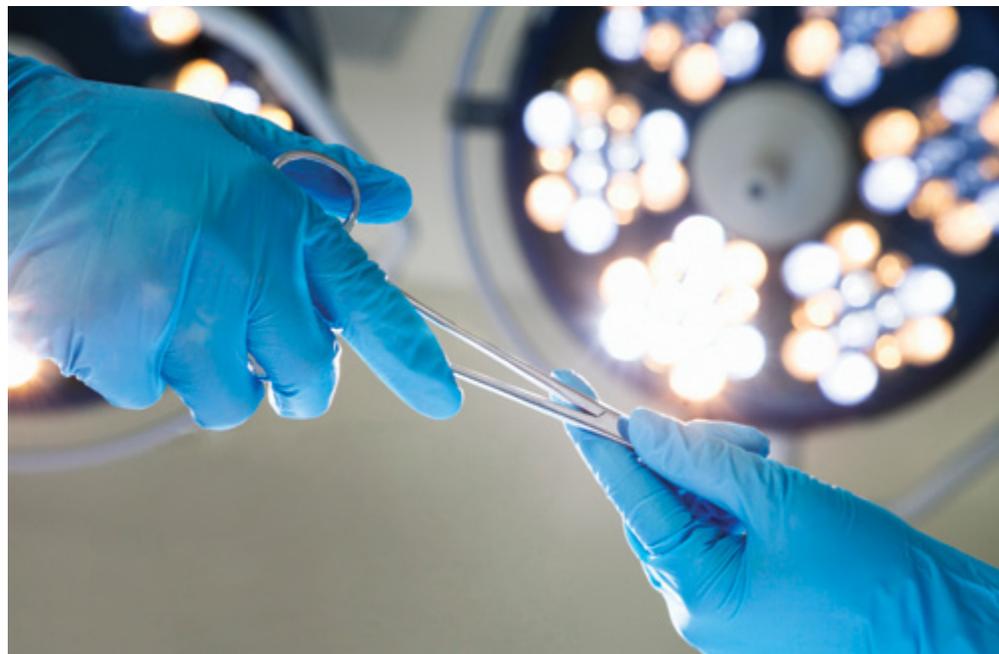
While most patients are able to go home and care for themselves with the help of their family and friends, some require professional help. Logan Health Home Care provides a full range of professional services in the comfort of our patients' homes. Under the direction of physicians, skilled care is given on an intermittent basis by registered nurses, physical therapists, speech therapists, occupational therapists, dietitians, social workers and home health aides. Home health professionals educate patients and their families to independently manage health care needs at home.

## HOSPICE

Hospice is a compassionate holistic approach to end-of-life care. The goal of hospice is to help people with serious illness live life fully, maintain their dignity and keep personal control over their lives. Hospice provides palliative care and symptom management, including emotional and spiritual support to patients and their families facing life-limiting illness. Hospice services are provided in homes, hospitals, and assisted living and long-term nursing facilities. Hospice is available to anyone with an illness whose physician determines his or her life expectancy to be six months or less.



Advancing SURGICAL CARE with INNOVATION and TECHNOLOGICAL  
EXPERTISE and COMPASSION.



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WORDS FROM OUR PATIENTS

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“By the third week after surgery, my husband was feeling much improved. He is walking the neighborhood and beginning to make plans to travel in the future. We can’t thank you enough for what you and your team accomplished. Had he not come to Logan health and been under your care, we both believe he would not be here today.”

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# LOGAN HEALTH SURGICAL SERVICES

Logan Health Surgical Services is a multidisciplinary department with specialty surgical capabilities and patient care. Surgical Services performed more than 10,000 surgical cases alone in 2020 despite enduring challenges presented by the COVID-19 pandemic. The surgical services team works closely together and includes fellowship-trained surgeons, skilled anesthesiologists, talented nurses, and highly qualified medical and allied health professionals. Facilities are available in Kalispell, Whitefish, Cut Bank, Conrad, Shelby, and Polson.

Patients reap the benefits of research and innovation at the Logan Health operating rooms and procedural areas. There are 16 operating rooms in Kalispell, and 7 state-of-the-art endoscopy rooms. The utilization of robotic and minimally invasive and laparoscopic techniques helps patients recover faster and with less pain. Logan Health operates robotic systems, such as daVinci, in minimally invasive foregut procedures, thoracic, oncologic, and

urologic surgeries. Surgical Services also supports several surgical specialty clinics including Logan Health Digestive Center, Logan Health Plastic Surgery, Logan Health Surgery Clinic, and Logan Health Urology.

Management of services, supplies and staff brought new challenges during the height of the COVID-19 pandemic. However, Logan Health Surgical Services was able to prioritize and adapt to the new landscape of patient care. Looking ahead, we strive to continue in our commitment to expanding access to critical surgical services both locally and regionally. We look to advance care with innovation and technology and continue to find ways to offer seamless patient care throughout our system focusing on expertise and compassion. The team's number one goal is to offer surgical and clinical access to our community so that their families receive the excellent care they deserve and need.

## SURGICAL SERVICES 2020 STATS

	Clinic Visits	Procedures	Total Encounters
Plastic & Reconstructive Surgery	2,958	212	3,170
Urology	14,516	812	15,328
Surgical Clinic (general, trauma, thoracic, vascular, surgical oncology)	8,058	1,509	9,567
Digestive Center	6,876	5,081	11,957
<b>CONSOLIDATED VOLUMES</b>	<b>32,408</b>	<b>7,614</b>	<b>40,022</b>

## PRE-ANESTHESIA CLINIC

With patient-centered care at the forefront of the Surgical Services vision, this year saw the grand opening of the Pre-Anesthesia Clinic located at Logan Health Medical Center in Kalispell. The pre-procedure clinic's goal is focused patient optimization, conducted in one convenient location. Services include patient health clearance, pre-procedural testing and patient education facilitated by registered nursing staff.

## PLASTIC & RECONSTRUCTIVE SURGERY

At Logan Health Plastic Surgery, cosmetic and reconstructive procedures are provided with personalized care tailored to the needs of each individual. The clinic strives to treat all patients with respect and integrity while providing advanced surgery that focuses on patient safety, standards of care, and exceeding expectations. Fellowship-trained surgeons and highly trained staff work as an efficient team that engenders patient trust and provides patients with an exceptional experience on every level. Services include cosmetic surgery, reconstructive surgery, and aesthetic procedures. Surgical collaboration is conducted within the system and with many partners throughout the region. The surgeons for Logan Health Plastic Surgery were awarded the 2020 Best of Flathead for Plastic Surgery.





## SURGICAL CLINIC

Logan Health Surgical Clinic is home to trauma, acute care, general, vascular, oncologic, and thoracic surgeons; this group offers a wide variety of complex care to our region. The general surgeons are not only committed to the communities' elective surgical needs but also participate as part of the trauma team. Logan Health Medical Center is credentialed by the American College of Surgeons and maintains a level III trauma designation. Trauma cases among the regional population have seen a 20 percent increase in volume year after year. As a result, in 2019, Logan Health Medical Center recruited the region's first fellowship-trained trauma and acute care surgeon. Together, the interdisciplinary surgical teams coordinate their expertise to ensure the best patient outcomes for both emergent and elective patient needs.

Logan Health vascular surgeons collaborate with the Heart Lung & Vascular program to provide care to patients needing anything from in-clinic vein ablations to inpatient aortic aneurysm grafts.

The growing regional thoracic and oncology surgical programs collaborate closely with vascular, cardiac, and cancer teams to provide a variety of complex and highly specialized services. The thoracic and oncological surgical teams deliver statewide outreach with tertiary care capabilities and multidisciplinary partners. Logan Health surgeons carefully evaluate who may benefit from surgery and are trained in modern surgical practices, such as minimally invasive laparoscopic and robotic techniques, to lessen the impact of surgery on patients. All Logan Health surgical teams work closely with departments throughout the system to best guide patients through the care continuum.

## DIGESTIVE CENTER

Logan Health Digestive Center is the premier group of gastrointestinal medical professionals in Montana and offers services to approximately 7,000 patients annually. The providers at the Digestive Center provide care to patients at the highest level augmented by advanced diagnostics and procedural capabilities. Collaboration with surgery (general, oncology, cardiovascular), medical subspecialties, women's health, interventional radiology and colleagues in pediatric gastroenterology allow comprehensive care of the entire spectrum of gastrointestinal disorders both common and complex. This collaboration includes care for gastrointestinal malignancies, disorders of the upper digestive tract, colon and small bowel, as well as the diseases of the liver and pancreas. The Digestive Center offers comprehensive consultative gastrointestinal care to the patients and health care providers of Montana. Endoscopy procedure cases exceeded 5,000 in 2020 despite COVID-19.

## UROLOGY

Logan Health Urology is a group of urologists and advanced practice providers specializing in treating conditions related to the male and female urinary tract and male and female sexual health issues. The urology specialists have years of experience treating urologic cancers, kidney stones, incontinence, enlarged prostates, and male/female sexual dysfunction with the latest technologies to provide optimal outcomes. These technologies include the daVinci Robotic surgical system, Urolift, sacral neuromodulation, and prosthetic devices. Outreach service areas include Whitefish, Columbia Falls, Polson, Eureka, and Libby. Urology clinic volumes exceeded 14,000, and patient volumes continue to increase.



ELEVATED and TRANSFORMED HEALTH CARE delivery  
for WOMEN, CHILDREN and their families.



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WORDS FROM OUR PATIENTS

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“The pediatric staff is superb. I’ve served in many organizations, both civilian and in the army, and the team you have assembled at Logan Health Children’s is absolutely superb in every way, there is none finer that I have seen. Please give everyone our best wishes and deepest sense of gratitude for all they did for our son and our family in our darkest ours.”

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## LOGAN HEALTH WOMEN'S & CHILDREN'S SERVICES

The mission of Logan Health's Women's and Children's program is to elevate and transform health care delivery for women, children and their families; improving health and providing peace of mind. Patients come from all over the state of Montana to access comprehensive and unique specialty care. Many patients who have traditionally left the borders of Montana can now choose to stay closer to home because of the broad array of specialty care for women and children. As the newest addition to the Logan Health team, we now have Montana's first dedicated pediatric medical facility, Logan Health Children's. This facility ensures patients and their families no longer have to travel out of state to receive the complex, pediatric specialty care that they desperately need.

Logan Health's full scope of women's and children's services provides multidisciplinary care for optimal patient outcomes for moms, babies, and children. The dedicated care teams specialize in supporting moms, infants and children through their care journeys in an efficient and compassionate manner. The extensive clinical and operational support services develop each unit to its maximum potential, aligning with facility and system goals to benefit not only health care partners and clinicians but patients and families as well.

### WOMEN'S & CHILDREN'S 2020 STATS

	Clinic Visits	Telemedicine Visits	Procedures	Post-Operative Visits	Total Encounters
Women's Care	14,571	556	600	308	16,035
Children's Primary Care	10,728	186	128	n/a	11,042
Children's Specialists	6,918	2,793	595	15	10,321
<b>CONSOLIDATED VOLUMES</b>	<b>42,538</b>	<b>3,535</b>	<b>1,323</b>	<b>323</b>	<b>63,754</b>



## WOMEN'S CARE

Logan Health offers a full spectrum of comprehensive care for women, including annual wellness visits, obstetrics, maternal-fetal medicine (MFM), and gynecological care. Our group of OB/GYNs, gynecological surgeons, certified nurse-midwives and MFM specialists are here to care for all women throughout their lifetime. The obstetrical providers focus on partnering with families to provide family-centered care throughout the entire birth process. When mothers have unexpected or complicated medical needs, the MFM specialists are available every day for consultation and support. The women's clinic also offers the full scope of comprehensive care, including advanced minimally invasive surgery as well as urogynecology. Logan Health's women's providers offer medical and surgical management for many health issues such as endometriosis, postmenopausal care, and infertility. Logan Health providers also work closely with primary care, and other medical/surgical specialists to ensure that the entire patient is at the center of everything we do.

## CHILDREN'S PRIMARY CARE

A focus on wellness and anticipatory visits play a pivotal role in the care of children. Logan Health Children's Primary Care is the region's only dedicated pediatric clinic. This team of experts provides the full complement of pediatric care including well-child visits, sports physicals, behavioral health support, and complex care management. In 2020, our team of six providers saw more than 10,000 visits.



## WOMEN'S AND CHILDREN'S ACUTE CARE

The most stressful moments of a family's life can be when a child or mother is admitted to the hospital for care. Logan Health's acute care services include Labor and Delivery, Neonatal ICU, Pediatric ICU and Pediatrics.

Labor and Delivery units are located at Logan Health Medical Center as well as Logan Health – Whitefish. The two units deliver more than 1,200 deliveries per year in the Flathead Valley. When newborn babies or older children become ill, we have an additional state-of-the-art pediatric facility to meet their needs. Logan Health Children's new 12-bed Neonatal ICU is located just down the hall from the mother's delivery room. This unit is staffed by specially trained nurses, respiratory therapists, nurse practitioners and physicians. Their expertise allows us to care for a patient born as early as 24 weeks gestation, all without ever needing to leave Montana.

As children age, the dedicated six-bed Pediatric ICU and 12-bed Pediatric Unit offer ongoing care. Children admitted to these units are cared for by the most comprehensive group of multidisciplinary care providers in the state of Montana. In 2020, the pediatric unit had more than 1,700 admissions, more than 1,500 pediatric surgeries and treated 34 pediatric cancer patients. The team includes nurses and physicians, pediatric trained pharmacists, dietitians, physical therapists, respiratory therapists, and social work as well as a Child Life specialist.





## PEDIATRIC SPECIALTY CARE

Logan Health Children's Specialists are expert physicians and medical staff that have assembled the technology, facilities and approaches necessary to care for the most fragile and complex pediatric patients. Built on our solid foundation in Kalispell, the statewide network of specialists ensures that children receive the most advanced medical care in Montana, and as close to home as possible. In 2020 alone, almost a third of the total visits were performed at our regional clinics in Bozeman, Missoula, Great Falls and Helena, and in total, specialists saw more than 10,500 patients.

Logan Health's promise to Montana is that while your child may require acute care in Kalispell, we will make sure every follow-up visit will be as close to home as possible, and many of our patients never need to leave their hometown to have access to high quality pediatric specialty care.

In 2020, the pediatric specialists traveled more than 117,000 miles to regional clinics to ensure Montana's children could stay close to home. Logan Health's medical staff now includes Montana's only pediatric neurosurgeon, full-time board-certified pediatric surgeon, pediatric physical medicine and rehabilitation physician, pediatric allergy/immunology and pediatric epilepsy specialists. Complementing these experts, we also have 24/7 access to pediatric gastroenterology, neurology, endocrinology, cardiology, anesthesia and hematology/oncology. We believe Montana-based providers know and understand Montana kids, and all of the providers are members of our communities.

# LOGAN HEALTH SUPPORT SERVICES

The value of teamwork was expressly felt during the COVID-19 pandemic. It demanded excellence and coordination of every employee in every department to maintain the highest standards of patient care. These standards could not have been achieved without the enduring and exemplary work of the Logan Health Support Services team. Support services include parking, security, nutritional services, spiritual care, laundry, biomed, plant operations, environmental services, facilities safety, planning and construction, child care, communications center, and medical equipment. With all the necessary components of patient care, one cannot excel without the other. Logan Health is fortunate to have a network of outstanding support.



## WORDS FROM OUR PATIENTS

“A nice young man cleaned the room while my husband was in surgery that Friday. I was all alone in there and God must have sent him, because he calmed my nerves and had such a loving and happy spirit, and was actually JOYFUL while he cleaned the room. His demeanor and energy were unmistakably coming from someone who is honorable and shows pride and commitment to doing a job well, and adding that extra lovingness when someone needs it. I couldn’t believe I was in a hospital.”

# A PATIENT'S STORY, A HEALTH CARE SYSTEM'S RESPONSE

*By Thomas Origitano, MD, PhD, FAANS, FACS*

## **Perspective one: How successful organizations work**

Most everyone knows and can recognize the amazing talent of the United States Navy's demonstration team, the Blue Angels. During any given demonstration, up to six highly trained pilots fly their F/18 C/D Hornets performing feats of courage and agility. What may not be known are the logistics which allow those brave pilots to fly. The Blue Angels team consists of 17 pilots supported by a maintenance crew of 113. For every one hour of flight time the jets require 10 hours of maintenance. The cost per hour of non-combat flight is \$24,000. The total annual budget for the program is \$40,000,000.

## **Perspective two: A weekend of neurosurgery calls at Logan Health**

The on-call period consists of a 72-hour block. During those 72 hours there were 13 phone consultations regarding patients from Kalispell, Whitefish, Polson, Helena, Plains, Anaconda, Missoula and Libby. There were four acute inpatient consultations and three hospital admissions. Three lifesaving surgeries were performed, two of the patients operated on would not have survived being transferred out-of-state. Five patients were evaluated and did not have to undergo transfer, thus avoiding transfer expenses, family travel and redundant hospital costs. Three patients with complex surgical needs were retained in the system rather than transferred out of the valley for specialized care. Four patients received comprehensive consultations and were able to go home with assurances that their follow-up care

plan was in place. Three patients were transferred to Logan Health for critical action for their life-threatening conditions. This is the story of one of those patients.

## **How small things turn into big issues: A case study**

LC is a 62-year-old female visiting her sister in Libby, Montana. She is known to have an antiphospholipid antibody syndrome for which she is on coumadin. Two days prior to her hospitalization she had a slip and fall from standing, slightly striking her head. Over the next two days she began to have progressive headaches. On the day of her admission the headaches began to accelerate. She developed nausea and vomiting. These progressive symptoms precipitated a visit to the local acute care hospital emergency room. She presented to the emergency room awake and alert, following commands. In the emergency room her mental status began to decline. Her breathing became rapid and shallow and her right pupil began to dilate. The physician in the ER recognized this constellation of symptoms as herniation syndrome, the deadly forerunner to brain death. He began a process of resuscitation and diagnosis and called Logan Health for help.

## **The clinical picture: Brain herniation syndrome**

Brain herniation syndrome is a prequel to brain death. The cranial vault is a closed cavity with only one outlet in the floor, where the spinal cord exits. Pressure in the head can increase due to bleeding in and around the brain, swelling, or mass lesions. As



the pressure increases, the brain begins to be squeezed, blood vessels shut off, the blood supply to the brain decreases and the brain begins to die. If this is not rapidly reversed it will lead to brain death.

#### Logan Health response: Time is brain

The call for help went to the Transfer Center. This center was devised to rapidly coordinate multiple disciplines in the health system to meet the unique needs of each patient and referring physician. A.L.E.R.T. was notified and initiated helicopter rescue. The A.L.E.R.T. team is a progressive and complete medical team capable of initiating, sustaining and advancing resuscitation while in transport. They are in active communication with the medical team at Logan Health. The neurological surgeon on-call was notified by the Transfer Center and connected to the Libby ER physician by phone and was able to review the patient's imaging telemedically.

The patient had experienced a devastating bleed which was causing severe pressure on the brain. Further resuscitation instructions were given to buy important time to get the patient transported for definitive care. Reversal of her anticoagulation was started. Upon arrival, the A.L.E.R.T. team evaluated the patient and directly communicated with the neurological surgeon allowing for continuation and advancement of resuscitation during transport.

#### Logan Health: Team of teams

Simultaneously to the launch of the A.L.E.R.T. team, the following teams were activated:

- 1) The operating room on-call team was notified; the operating room was opened and equipped.

- 2) Anesthesia was notified and readied.
- 3) Pharmacy was notified and the appropriate antidote for anticoagulant reversal was readied.
- 4) The OR team (nurse, surgical technologist, neurological surgeon, anesthesiologist, and advanced practice provider) met the patient in the emergency room and took her directly to the operating room for decompression.
- 5) Upon arrival at Logan Health Medical Center, the prehospital resuscitation efforts had led to a decrease in the pupil size. This, in combination with rapid transport, had given the patient a window of opportunity for definitive treatment.

#### Definitive treatment

In the operating room the antidote for the anticoagulation was given. Fresh frozen plasma was made available to reinforce and extend the effects of the antidote. A right hemi-craniotomy was performed with removal of the clot and decompression of the brain. Reperfusion of the brain resulted in brain swelling. The bone flap was left off to accommodate the swelling and stored for later re-implantation. Post-operatively the pupils were small, equal and reactive to light. She was admitted to the ICU where dedicated intensivists coordinated her critical care and managed her medical comorbidities. She subsequently underwent a tracheostomy for optimal management of extended mechanical breathing to support her while her brain recovered.

#### Postoperative course

On the fifth post-operative day she began to open her eyes and squeeze her right hand. Over the ensuing days her left sided weakness (a result of compression to the right side of her brain) began to resolve. On subsequent days she awoke,

smiled, and began to mouth words to her family. On day 14 the tracheostomy was removed. Her first spoken words since the day of her admission were “hello” and “thank you.” On the following days she underwent re-implantation of her bone flap. She was then transferred to a rehabilitation facility closer to her home. Today, she has returned home to her husband and is living independently.

#### Key take away points: Defining value

- A husband has a wife with whom to grow old.
- A daughter has a mother for counsel, comfort and support.
- A grand-daughter has her grandmother to experience and participate in her life.
- The patient would not have survived an out-of-state transfer.

#### Key health system resources utilized

- A transfer center that coordinated their teams of teams.
- Early dispatch of an advanced and comprehensive aero-medical transport service.
- 24/7/365 neurological surgery coverage.
- Operating room facilities that can accommodate emergent, complex interventions.

- 24/7/365 on-call operating room team, including anesthesia.
- A computerized radiology system which allows the neurosurgeon to review imaging remotely and make appropriate accommodations for care.
- A blood bank which can prepare lifesaving blood products and make them available for the patient upon arrival.
- A pharmacy that can ready antidote for the anticoagulant which allowed for prompt surgical intervention.
- An ICU with experienced nursing staff and intensivist that could manage the multiple medical complications associated with the patient’s acuity.
- Plus many other unseen and unheralded individuals doing their job in support of the clinical teams.

#### Summary and personal observations of a neurological surgeon

This is not a surgeon’s story, but the story of a health care system dedicated to offering advanced and comprehensive care to the region (the surgeons only fly the jets, the jets do not fly without the system). This is a story of teams working together to coordinate care: Many touches, one plan and one place.



## KEY CONTACTS

### LOGAN HEALTH ONE CALL

#### **(833) LOGAN4U | (833) 564-2648**

Logan Health's team of registered nurses is available 24/7 to facilitate timely communication for acute telemedicine consults, provider-to-provider consults, direct admissions, and transfers. The One Call team partners with A.L.E.R.T. and specialty transport teams to coordinate flight and ground transports as needed.

### HOSPITALS / FACILITIES

Logan Health Behavioral Health	(406) 756-3950	200 Heritage Way, Kalispell
Logan Health – Children's	(406) 752-5111	350 Sunnyview Lane, Kalispell
Logan Health – Conrad	(406) 271-3211	805 Sunset Blvd., Conrad
Logan Health – Cut Bank	(406) 873-2251	802 2nd Street SE, Cut Bank
Logan Health Medical Center	(406) 752-5111	310 Sunnyview Lane, Kalispell
Logan Health – Shelby	(406) 434-3200	640 Park Ave., Shelby
Logan Health – Whitefish	(406) 863-3600	1600 Hospital Way, Whitefish

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in a town near you, please visit [logan.org/locations](https://logan.org/locations)

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