

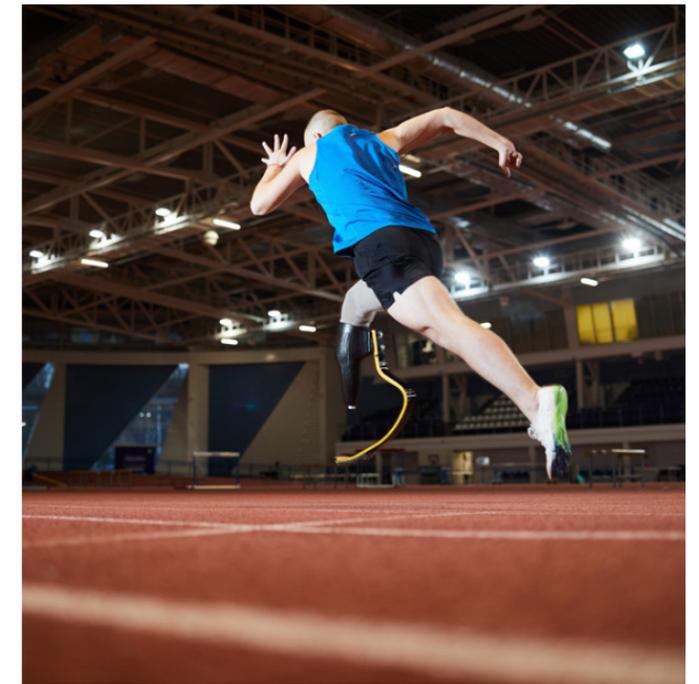


90 Years of Physical Medicine and Rehabilitation





Amputee Rehabilitation



Dear Colleagues,

We are excited to reflect on our rich history and dynamic growth in the field of physical medicine & rehabilitation (PM&R). This year, we are proud to present a special showcase: the 90th anniversary of PM&R at Mayo Clinic.

Then: PM&R staff and residents began attending courses on prosthetics and orthotics in Chicago in 1946, and this training remained part of the residency program until Mayo Clinic developed its own training in the 1970s.

This transition allowed for the development of the multidisciplinary Mayo Clinic Amputee Rehabilitation Clinic in 1972, which included regular collaborative meetings between physiatrists, prosthetists, physical and occupational therapists, vascular specialists, and orthopedic surgeons.

Now: Today, this multidisciplinary clinic has grown to incorporate the latest advancements in technology and research, seamlessly integrating these innovations into patient care and rehabilitation.

Our patients receive comprehensive support from experts specializing in both upper and lower limb amputation, as well as dedicated personnel in cancer rehabilitation and pediatric rehabilitation. This experienced team brings a wealth of knowledge to address the unique challenges of limb loss for individuals of all ages and backgrounds and enrolling patients in clinical trials.



Brain Injury Rehabilitation



Then: By 1986, PM&R provided brain injury rehabilitation, which was mostly patients with stroke and traumatic brain injury. In 1990, 12 patients completed the hospital and outpatient Brain Injury Rehabilitation program. Day programming began in 1987, which assisted 6 patients for 6 to 7 months, and was highly successful at increasing cognitive remediation, communication and social skills.



Now: Today, Brain Rehabilitation at Mayo Clinic helps more than 1,300 people recover from brain injuries each year through both our adult and pediatric Brain Rehabilitation programs.

Brain injury PM&R physicians coordinate a multidisciplinary team on both clinical care and research. Collaboration across the nation includes studies on epidemiology, telemedicine, community-based trials and other treatments to improve outcomes after brain injury.



Cardiac Rehabilitation



Then: The Cardiac Rehabilitation Program was started at Mayo Clinic in 1967 and was a collaborative program with PM&R, cardiology, internal medicine, psychiatry, dietetics, social services, and chaplaincy.

By 1972, the program expanded to more Mayo Clinic clinical areas and a cardiac ICU and included pharmacists and vocational counselors. At this time, patients with myocardial infarction were hospitalized for 15 days with a slow physical therapy regimen, aiming to have the patient calm walking on the final day.



Now: Mayo Clinic offers advanced cardiac rehabilitation for adult and pediatric patients recovering from various cardiovascular events and procedures, including heart attacks, bypass surgery, valve repairs and heart failure. The state-of-the-art facilities care for patients with a variety of cardiac conditions. These include acute myocardial infarction, coronary artery bypass surgery, stable angina pectoris, heart valve repair or replacement, percutaneous transluminal coronary angioplasty or coronary stenting, or heart or heart-lung transplant. The cardiac rehab team provides education and activities related to exercise training, risk factor modification and psychosocial well-being.



Hand Rehabilitation



Then: Hand rehabilitation was one of the first needs of PM&R and became an official multidisciplinary subspecialty practice in 1967. Partnering with Orthopedics, each person's care in the Hand Clinic included a physical therapist, occupational therapist and a social worker.



Now: Currently, hand rehabilitation features cutting-edge, minimally invasive procedures, such as the ultrasound-guided thread carpal tunnel release, innovative customized 3D printed splints and a collaborative approach to complex diagnoses through specialized clinics, such as the Brachial Plexus Clinic and Upper Limb Treatment and Rehabilitation Clinic (ULTRA) for upper limb amputees. These advancements highlight a multidisciplinary, technology-driven focus that enhances patient outcomes and care for hand and upper extremity conditions.



Inpatient Rehabilitation



Then: In 1947, a 15-bed inpatient service was approved for Physical Medicine when there were only 2 physiatrists on staff. Dr. Frank Krusen took the more severe and complex patients who were admitted to the unit. Dr. Earl Elkins treated outpatients with relatively minor physical injuries. The total number of patients who were seen in 1947 was 11,869.

At this time, increasing referrals were for inpatients from Rheumatology and Orthopedic Surgery, who then had prolonged periods of hospitalization (usually 3 weeks or longer for patients with rheumatoid arthritis and following hip cup-arthroplasties).



Now: Our 36-bed inpatient unit has specialized care for all types of patients, including pediatrics.

We have achieved Commission on Accreditation of Rehabilitation Facilities (CARF) 3-year accreditation for multiple programs. Our unit has team members that include physicians, nurses, psychologists, therapists and social workers. Our inpatient rehabilitation unit is proud to be a Traumatic Brain Injury Model System and Spinal Cord Injury Model System site.

We are one of 16 recognized Rehabilitation Innovation Centers in the nation and are ranked No. 6 in the U.S. News & World Report's rankings of 'Best Hospitals for Rehabilitation.'



Lymphedema and Cancer Rehabilitation



Then: Early on, the need to provide comprehensive care for patients with cancer, lymphedema or both was obvious. Therapy care for these patients was provided at the early PM&R practice sites, both inpatient and outpatient.

Mayo Clinic developed the North Central Cancer Treatment Group in 1978 to bring cancer treatments to patients and research better alternatives. After an “eminently successful” first year, the Cancer Adaptation Team was created in 1979 with personnel from PM&R, dietetics, social services, chaplaincy, nursing, and the patient’s primary physician. This well-rounded team provided coordinated services to cancer patients seeking symptom management and assisting with recovery.



Now: By 2008, Mayo Clinic’s Lymphedema Clinic was already one of the largest treatment centers in the Midwest and one of the most experienced in the nation.

Currently, more than 3,000 people with lymphedema receive care at Mayo Clinic each year. Mayo Clinic lymphedema and cancer rehabilitation specialists provide compassionate, comprehensive care for both people with cancer and without, and continue this care after cancer treatment as well, focusing on weakness, debility, pain and fatigue.



Pediatric Rehabilitation



Then: Pediatric rehabilitation at Mayo Clinic was propelled forward with the creation of the Hemophilia Clinic in 1974. This clinic had specialists from PM&R, Hematology, and Orthopedic Surgery and boomed during the 1980s and 1990s.

The multidisciplinary Cerebral Palsy and Spina Bifida Clinic, which was developed in the 1990s, brought a whole new standard of medical care to children with developmental disorders.



Now: Our board-certified Pediatric Rehabilitation physicians lead both inpatient and outpatient teams. The Pediatric Inpatient Rehabilitation Unit has continuous CARF accreditation since 2007. For hospitalized children who are not able to come to the rehabilitation unit, including post-transplant and children with cancer on certain chemotherapies, a structured multidisciplinary approach through Rehab on the Floor is available. Our pediatric therapy team is a leader in early mobilization for children in intensive care, including those on extracorporeal membrane oxygenation (ECMO).

In the outpatient setting, the Cerebral Palsy and Spina Bifida Clinic is nationally recognized as a Cerebral Palsy Research Network registry member and Spina Bifida Association Clinical Care Partner. We perform advanced muscle tone management procedures, have a cancer rehabilitation program, and partner in numerous clinics from NICU to Neuromuscular Clinic.



Spinal Cord Injury Rehabilitation



Then: In 1945, Dr. Elkins started an inpatient rehab program for patients with spinal cord injury (SCI). The program was upgraded to a multidisciplinary program in 1971, where it quickly brought benefits to patients and care teams. The SCI program was crucial in creating treatment plans for spinal injuries and disorders and for avoiding UTIs, pressure sores and urosepsis, showing an immediate benefit to hospitalization length of stay and recurrence rates. This was the foundation for two other important subspecialties: Pelvic Floor Dysfunction Program and Bowel Evacuation Disorders Program.



Now: Since then, we have helped thousands of people recover from traumatic and nontraumatic spinal disorders. We use advanced technology, high-level testing, personalized care and research to provide comprehensive initial and lifetime rehabilitation.

Research advancements in the Mayo Clinic movement lab and Adaptive Rehabilitation Technology lab provide the ability to bring innovations quickly and directly to patient care.

Specifically trained therapists provide patients with one-on-one sessions and an intense 2-week program to retrain muscles and improve pelvic floor and bowel functions.



PM&R Residency Program



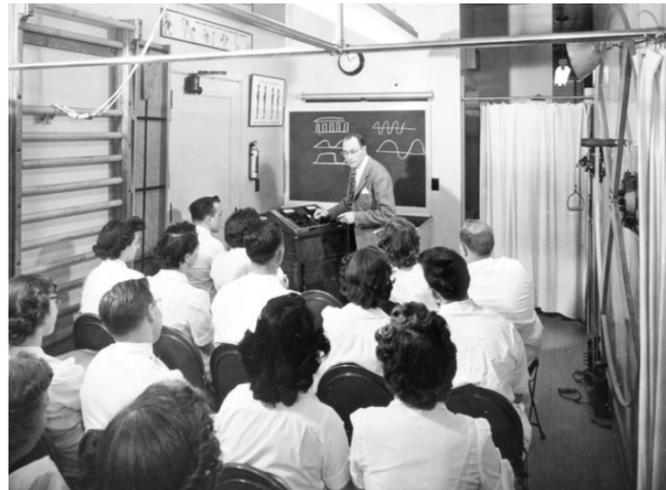
Then: The first-ever 3-year PM&R Residency Program started at Mayo Clinic in 1936 with Dr. Elkins. After graduating in 1939, he joined Mayo Clinic as the second physiatrist on staff and started his exemplary career of caring for patients and educating the next generation of PM&R physicians. He was integral in continuing to develop the residency program and training physical therapy students, leading to a PM&R education foundation we are proud of.



Now: The Mayo Clinic PM&R Residency Program significantly outperforms national averages, with fourth-year residents completing over three times the number of procedures compared with the national average, a 100% board certification rate and consistently higher resident satisfaction scores. Residents are involved in numerous scholarly projects and can get involved in specialized tracks for Medical Education, Lifestyle Medicine and Clinical Innovation. Residents excel across all major subject areas, reflecting the program's strong commitment to comprehensive clinical training and professional development.



Physical Therapy School



Then: In 1938, a two-year Physical Therapy School opened at Mayo Clinic. During WWII (1942-1946), it was temporarily replaced by emergency training and apprentice programs. Once the original program reopened in 1947, there have been no major interruptions.

The PT Program was upgraded several times, including a master's and then a doctoral program in 2004.



Now: The Doctor of Physical Therapy (DPT) Program upholds one of the nation's highest benchmarks, achieving a 99.9% ultimate pass rate since its inception. In 2025, the U.S. News & World Report ranked the DPT program at No. 20.

Additionally, Mayo Clinic across all sites has broadened and enhanced its physical and occupational therapy education program offerings with 12 ABPTRFE accredited residencies including orthopedics, neurologic, oncology, sports medicine, acute care, and more.



PM&R Research



Then: In the early years of PM&R, modalities such as infrared heat and electrical stimulation were being developed. Emphasis was mostly on braces, exercise and managing ADLs.

Research time was not securely protected, and most research was performed by a few staff physicians.

The desire to create a PM&R Research Program was set in motion with the creation of the department in 1935. But with complications of WWII and staffing issues, the program wasn't finalized until 1947. At that time, all PM&R residents were expected to complete at least 1 research project during their residency. Only a year later in 1948, Dr. Krusen noted: "It is especially gratifying to note that our local program in research in physical medicine is gaining national recognition."



Now: Over the past 90 years, we have seen remarkable progress in research and technology. We use cutting-edge technology such as robotic gait orthosis systems and nerve and tendon transfers to optimize outcomes. Dedicated research labs, assistive technology specialists and multidisciplinary collaborative partnerships allow us to bring futuristic medical advances to our patients now. Our research impacts diverse patient populations across the lifespan, ranging from individuals with spinal cord injuries and other neurologic conditions to those with cancer, pain and limb loss. Our team recently completed a 5-year clinical trial involving temporary implantation of stimulation electrodes in participants with chronic paralysis due to spinal cord injury, enabling reaching, standing and stepping. Additionally, across four pragmatic trials, we have shown that digitally enhanced telecare approaches enable the scalable delivery of timely, individualized and effective rehabilitation services, reaching more than 110,000 patients in routine clinical care.



PM&R Mattering, Belonging, and Engagement

“In 1990, I arrived in the PM&R Department as a visiting medical student and quickly felt not only the opportunity of a world-class education but also a deep sense of belonging. Thirty-five years later, it is an honor to serve as our department’s Belonging co-leader.”

— Karen L. Newcomer, M.D.

This year, we were delighted to participate in the meaningful work we accomplished together, including:

- 4 Grand Rounds on Belonging topics
- 6 Mattering and Belonging minutes
- 55 newsletter contributions
- Neurodiversity Lunch and Learn



As we look ahead we are filled with anticipation for the possibilities that lie before us. We are actively exploring innovations in technology, AI, automation and wearable devices to enhance patient engagement and outcomes. We are dedicated to building on our legacy while embracing new tools and approaches that will shape the future of rehabilitation medicine.

Thank you for your passion, your collaboration and your unwavering support. Here is to the future of growth, discovery and making a difference — together.

With gratitude and excitement,

Mayo Clinic Physical Medicine and
Rehabilitation in Rochester, Minnesota



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