To promote quality improvement, Cleveland Clinic has created a series of Outcomes books similar to this one for many of its institutes. Designed for a physician audience, the Outcomes books contain a summary of our surgical and medical trends and approaches, data on patient volumes and outcomes, and a review of new technologies and innovations.

Although we are unable to report all outcomes for all treatments provided at Cleveland Clinic — omission of outcomes for a particular treatment does not necessarily mean we do not offer that treatment — our goal is to increase outcomes reporting each year. When outcomes for a specific treatment are unavailable, we often report process measures associated with improved outcomes. When process measures are unavailable, we may report volume measures; a volume/outcome relationship has been demonstrated for many treatments, particularly those involving surgical techniques.

In addition to our internal efforts to measure clinical quality, Cleveland Clinic supports transparent public reporting of healthcare quality data and participates in the following public reporting initiatives:

- Joint Commission Performance Measurement Initiative (qualitycheck.org)
- Centers for Medicare & Medicaid (CMS) Hospital Compare (hospitalcompare.hhs.gov)
- Ohio Department of Health (ohiohospitalcompare.ohio.gov)
- Cleveland Clinic Quality Performance Report (clevelandclinic.org/QPR)

Our commitment to providing accurate, timely information about patient care also will help patients and referring physicians make informed healthcare decisions.

We hope you find these data valuable. To view all our Outcomes books, please visit Cleveland Clinic's Quality and Patient Safety website at clevelandclinic.org/quality/outcomes.
what’s inside

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Prefer an e-version?

Visit clevelandclinic.org/OutcomesOnline, and we’ll remove you from the hard copy mailing list and email you when next year’s books are online.
Dear Colleagues,

I am pleased to again share with you Cleveland Clinic Physical Medicine and Rehabilitation’s outcomes data. This report reflects an ongoing effort to collect validated health status measures through our Knowledge Program® to track care longitudinally across venues. The process is facilitated by disease-specific care paths that bridge geography, unifying our institute and ensuring utilization of standardized, evidence-based practices throughout our health system.

In addition to excellence in clinical care, research is a primary focus for the Department of Physical Medicine and Rehabilitation. The National Institutes of Health have recognized our staff with four major grant awards. The excellence exhibited by our researchers elevates all of our activities, bringing a spirit of innovation to our department.

We are increasingly migrating toward disease management across both venues and time. Continued development and refinement of tools such as care paths and the Knowledge Program® enable more accurate measurement and reporting of our performance. The message to our patients is more visceral: We will be there whenever and wherever you need us, and you can trust us with your healthcare.

Please let us know if we can assist with your patients’ rehabilitation needs. As always, we welcome your comments.

Frederick Frost, MD
Interim Chairman, Department of Physical Medicine and Rehabilitation
Executive Director, Cleveland Clinic Rehabilitation and Sports Therapy
The multidisciplinary Cleveland Clinic Neurological Institute includes more than 300 medical, surgical and research specialists dedicated to the diagnosis, treatment and rehabilitation of adult and pediatric patients with neurological and psychiatric disorders. The institute model allows patients to access the care they need through specialized, disease-specific centers that integrate the expertise of neurologists, neurosurgeons, orthopaedic surgeons, psychiatrists, psychologists, physiatrists, neuroradiologists and allied health professionals. This model also facilitates collaboration and improved measurement of quality and outcomes on a continuing basis.

*U.S.News & World Report’s* “America’s Best Hospitals” survey has consistently ranked both our adult and pediatric neurology and neurosurgery programs among the top 10 in the nation. Our neurology, neurosurgery, pediatric neurology/neurosurgery and psychiatry programs also hold top ranking in Ohio.

The Neurological Institute comprises the following centers as well as departments that integrate resident training, academics and research:

- Rose Ella Burkhardt Brain Tumor and Neuro-Oncology Center
- Center for Behavioral Health
- Lou Ruvo Center for Brain Health
- Cerebrovascular Center
- Cleveland Clinic at Home
- Epilepsy Center
- Mellen Center for Multiple Sclerosis Treatment and Research
- Center for Neuroimaging
- Center for Neurological Restoration
- Neurological Center for Pain
- Neuromuscular Center
- Center for Pediatric Neurology and Neurosurgery
- Department of Physical Medicine and Rehabilitation
- Center for Regional Neurosciences
- Sleep Disorders Center
- Center for Spine Health
We provide care across the spectrum of neurological and psychiatric disorders, including primary and metastatic tumors of the brain, spine and nerves; pediatric and adult epilepsy; headache, facial pain syndromes and associated disorders; movement disorders such as Parkinson’s disease, essential tremor and dystonia; neurocognitive disorders; cerebral palsy and spasticity; hydrocephalus; metabolic and mitochondrial disease; fetal and neonatal neurological problems; multiple sclerosis; stroke; cerebral aneurysm; brain and spinal vascular malformations; carotid stenosis; intracranial atherosclerosis; nerve and muscle diseases, including amyotrophic lateral sclerosis, peripheral neuropathy, myasthenia gravis and myopathies; sleep disorders; mental/behavioral health disorders and chemical dependency; impairments and disabilities in the areas of mobility, self-care, communication, swallowing and cognition.

**Expert, Specialized Diagnosis**

Our Neurological Institute physicians draw on advanced diagnostic capabilities and experience. Our imaging services include structural and functional MRI, CT, PET, myelography, diagnostic cerebral/spinal angiography, interventional neuroradiology, and carotid and transcranial Doppler ultrasound. Our neuroimaging staff subspecializes in specific disease entities such as epilepsy and cerebrovascular disease, ensuring accurate, in-depth interpretations.

Additional diagnostic tools are found in our epilepsy monitoring units, sleep laboratories, neuropsychological testing facilities, electromyography laboratory, autonomic laboratory and cutaneous nerve laboratory.

**The Latest Treatment Modalities**

Patients receive leading-edge treatment options at the Neurological Institute, where we continue to advance such innovations as deep brain stimulation (DBS), laser interstitial thermal therapy (LITT) for brain tumors, epilepsy surgery, stereotactic spine radiosurgery, endovascular treatment of cerebral aneurysms and vascular malformations, and neuroendoscopy. The Rose Ella Burkhardt Brain Tumor and Neuro-Oncology Center was one of the first such facilities worldwide to integrate the newest intraoperative MRI technology with its pioneering LITT capability to enhance brain tumor treatment. The interventional MRI suite accommodates many other neurosurgical procedures as well, including DBS surgery.

Our main campus and four Cleveland Clinic regional hospitals are Joint Commission-designated Primary Stroke Centers, in line with our initiative to standardize stroke treatment protocols across our health system so that patients in Northeast Ohio have access to the same high-quality stroke care no matter where they live. We are developing structured care paths for additional disorders – a critical step in bridging geography to deliver high-quality, patient-centered care and to function as an integrated enterprise.
Relevant Research

We conduct research directly related to conditions experienced by our patients. A prime example is concussion, a signature injury of athletes at all levels of competition as well as military veterans who have served in Iraq and Afghanistan. Neurological Institute investigators are active participants in an intense interdisciplinary research effort at Cleveland Clinic to better prevent, diagnose and treat concussion. Much of this work is going forward in our Spine Research Laboratory.

Our neuroscientists pursue translational research, clinical trials of drug and device interventions, neuroimaging research, epidemiology and health outcomes, behavioral and psychiatric research, and research into better diagnostic methods. Typically, more than 200 clinical research trials are under way in the Neurological Institute. In 2010, we were awarded more than $19 million in neurologically based research grants and contracts.

Convenient Care in the Community

We are committed to making access to world-class care convenient for all patients. Regional facilities extend advanced treatments, technologies and the expertise of Neurological Institute physicians to community hospitals and family health centers throughout the Cleveland Clinic health system. As a result, patients can easily access specialists who treat the most complex neurological conditions.

Key components in our regional network include:

- Cleveland Clinic Neurological Institute at Lakewood and Hillcrest hospitals, which provides comprehensive services to Cleveland’s suburban residents.

- Cleveland Clinic Rehabilitation Hospitals, with a total of 98 adult acute inpatient rehabilitation beds at our main campus and two suburban hospitals.

- Cleveland Clinic Rehabilitation and Sports Therapy, a unique consortium with Cleveland Clinic Orthopaedic & Rheumatologic Institute that engages 650-plus physical and occupational therapists throughout the region.

- Cleveland Clinic at Home, which brings in-home and distance healthcare to individuals in an expansive area comprising 14 Ohio counties and provides home infusion/pharmacy services in eight states.

- Our Sleep Disorders Center, which conducts overnight sleep studies at nine locations throughout the community, including eight conveniently located hotels.

- Cleveland Clinic Pediatric Neurology and Neurosurgery services are provided at Fairview and Hillcrest hospitals, as well as several family health centers, our pediatric rehabilitation hospital at Shaker Campus, and the Lerner Autism School.
Extending Our Services

Neurological Institute services extend beyond the region. The Lou Ruvo Center for Brain Health diagnoses, treats and researches Alzheimer’s disease and other neurocognitive disorders from locations in Cleveland and Lakewood, Ohio, and Las Vegas and Reno, Nevada. Diagnostic tests performed in Nevada are digitally transferred to Cleveland and other Cleveland Clinic sites for interpretation by one of the world’s leading neuroimaging centers. At Cleveland Clinic Florida, epileptologists work with their colleagues at the Cleveland Clinic Epilepsy Center to diagnose and treat adults with epilepsy. All Florida epileptologists have dual appointments with the Neurological Institute in Cleveland.

In addition, our Cerebrovascular Center’s Telestroke Network offers medical staff at other hospitals remote access to patient consultation services from our neurological specialists. The network is enabled with a mobile, two-way videoconference system and a dedicated link for transmitting imaging studies.

Integrated Nursing

Nurses in the Neurological Institute rank as respected members of the care team. As such, they are encouraged to offer input to physicians and administrators and to engage in problem solving and process improvement. Patients benefit from this integration through improved coordination of care and commonly held provider goals.

Opportunities for further education and career advancement are readily available to institute nurses. Their participation is welcomed in all continuing education programs, and those with at least two years’ experience in the institute can aspire to certification in neuroscience nursing. These subspecialists staff areas such as the neurological intensive care and stepdown units that treat the most complex patients.

Each November, Cleveland Clinic’s “Innovations in Neuroscience” conference convenes in Cleveland. This meeting, originally limited to nurses, now includes physician assistants and medical assistants as organizers continue to work toward increased provider collaboration.

Pioneering the Collection of Data and Outcomes

The Neurological Institute’s Knowledge Program® has captured data from more than one million self-administered patient questionnaires. One of the world’s first interactive clinical patient databases, the Knowledge Program® is demonstrating its value as it evolves, with collection and correlation of electronic information on patient health status, quality of life and outcomes.

We are aggregating this patient-generated data with information from other sources, such as imaging results and information collected during patient encounters, to optimize clinical decision making, quality improvement and research opportunities.

All these data are accessible to physicians through an interface with the patient’s electronic medical record. The Knowledge Program® is proving to be among our most constructive tools for delivering individualized care to improve outcomes and quality of life, in line with Cleveland Clinic’s guiding principle: Patients First.
### 2010 Statistical Highlights

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Physicians</td>
<td>225</td>
</tr>
<tr>
<td>Clinical Residents and Fellows</td>
<td>145</td>
</tr>
<tr>
<td>Research Fellows</td>
<td>17</td>
</tr>
<tr>
<td>Advanced Practice Nurses</td>
<td>38</td>
</tr>
<tr>
<td>Physician Assistants</td>
<td>15</td>
</tr>
<tr>
<td>Medical Students (NI Rotation)</td>
<td>85</td>
</tr>
</tbody>
</table>

### Inpatient Facilities (Main Campus)

<table>
<thead>
<tr>
<th>Facility</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient General Neuro Beds</td>
<td>50</td>
</tr>
<tr>
<td>Neuro ICU Beds</td>
<td>22</td>
</tr>
<tr>
<td>Neuro Stepdown Beds</td>
<td>17</td>
</tr>
<tr>
<td>EMU Beds – Pediatrics</td>
<td>9</td>
</tr>
<tr>
<td>EMU Beds – Adult</td>
<td>14</td>
</tr>
<tr>
<td>Chemical Dependency Unit Beds</td>
<td>13</td>
</tr>
<tr>
<td>Inpatient Rehab Beds</td>
<td>12*</td>
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</table>

### Inpatient Facilities (Regional)

<table>
<thead>
<tr>
<th>Facility</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatric Unit Beds</td>
<td>254</td>
</tr>
<tr>
<td>Rehabilitation Beds</td>
<td>81*</td>
</tr>
<tr>
<td>Skilled Nursing Units</td>
<td>96</td>
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</table>

* As of March 2011
<table>
<thead>
<tr>
<th>Initial Outpatient Visits**</th>
<th>10,627</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brain Health</td>
<td>911</td>
</tr>
<tr>
<td>Brain Tumor Neuro-Oncology</td>
<td>405</td>
</tr>
<tr>
<td>Cerebrovascular</td>
<td>353</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>746</td>
</tr>
<tr>
<td>Headache and Pain</td>
<td>920</td>
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<tr>
<td>Mellen Center</td>
<td>754</td>
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<tr>
<td>Neurological Restoration</td>
<td>419</td>
</tr>
<tr>
<td>Neurology</td>
<td>654</td>
</tr>
<tr>
<td>Neuromuscular</td>
<td>872</td>
</tr>
<tr>
<td>Pediatric Neurology***</td>
<td>915</td>
</tr>
<tr>
<td>Pediatric Neurosurgery***</td>
<td>286</td>
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<tr>
<td>Physical Medicine and Rehabilitation</td>
<td>429</td>
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<tr>
<td>Psychiatry and Psychology</td>
<td>334</td>
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<tr>
<td>Regional Neurological Institute</td>
<td>932</td>
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<tr>
<td>Sleep</td>
<td>194</td>
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<tr>
<td>Spine</td>
<td>1,503</td>
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</table>

<table>
<thead>
<tr>
<th>Total Outpatient Visits</th>
<th>154,944</th>
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</thead>
<tbody>
<tr>
<td>Brain Health</td>
<td>4,214</td>
</tr>
<tr>
<td>Brain Tumor Neuro-Oncology</td>
<td>7,049</td>
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<tr>
<td>Cerebrovascular</td>
<td>3,141</td>
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<tr>
<td>Epilepsy</td>
<td>7,384</td>
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<tr>
<td>Headache and Pain</td>
<td>11,367</td>
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<tr>
<td>Mellen Center</td>
<td>6,033</td>
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<tr>
<td>Neurological Restoration</td>
<td>5,237</td>
</tr>
<tr>
<td>Neurology</td>
<td>4,228</td>
</tr>
<tr>
<td>Neuromuscular</td>
<td>5,293</td>
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<tr>
<td>Pediatric Neurology***</td>
<td>8,810</td>
</tr>
<tr>
<td>Pediatric Neurosurgery***</td>
<td>2,841</td>
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<tr>
<td>Physical Medicine and Rehabilitation</td>
<td>5,465</td>
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<td>Psychiatry and Psychology</td>
<td>31,655</td>
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<tr>
<td>Regional Neurological Institute</td>
<td>19,769</td>
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<tr>
<td>Sleep</td>
<td>5,131</td>
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<tr>
<td>Spine</td>
<td>27,327</td>
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</table>

** Initial visits for patients new to Cleveland Clinic

*** Children and adolescents are also included under Epilepsy, Psychiatry and Psychology, and Sleep
Neurological Institute Overview, continued

<table>
<thead>
<tr>
<th>Admissions</th>
<th>15,491</th>
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<tbody>
<tr>
<td>Brain Tumor Neuro-Oncology</td>
<td>1,036</td>
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<tr>
<td>Cerebrovascular</td>
<td>1,178</td>
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<tr>
<td>Epilepsy</td>
<td>1,482</td>
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<tr>
<td>Neurological Restoration</td>
<td>192</td>
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<tr>
<td>Neurology</td>
<td>695</td>
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<tr>
<td>Neurosurgery</td>
<td>360</td>
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<tr>
<td>Pediatric Neurology*</td>
<td>140</td>
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<tr>
<td>Pediatric Neurosurgery*</td>
<td>210</td>
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<tr>
<td>Psychiatry and Psychology</td>
<td>8,617**</td>
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<tr>
<td>Regional Neurological Institute</td>
<td>203</td>
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<td>Spine</td>
<td>1,378</td>
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<table>
<thead>
<tr>
<th>Inpatient Days</th>
<th>96,808</th>
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<tbody>
<tr>
<td>Brain Tumor Neuro-Oncology</td>
<td>4,976</td>
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<tr>
<td>Cerebrovascular</td>
<td>7,044</td>
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<tr>
<td>Epilepsy</td>
<td>9,025</td>
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<tr>
<td>Neurological Restoration</td>
<td>726</td>
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<tr>
<td>Neurology</td>
<td>3,770</td>
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<tr>
<td>Neurosurgery</td>
<td>1,891</td>
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<tr>
<td>Pediatric Neurology*</td>
<td>491</td>
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<tr>
<td>Pediatric Neurosurgery*</td>
<td>960</td>
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<tr>
<td>Psychiatry and Psychology</td>
<td>60,188**</td>
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<tr>
<td>Regional Neurological Institute</td>
<td>1,213</td>
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<td>Spine</td>
<td>6,524</td>
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</tbody>
</table>

* Children and adolescents are also included under Epilepsy, Psychiatry and Psychology

** Includes totals from the following Cleveland Clinic regional hospitals: Euclid, Fairview, Huron, Lakewood, Lutheran, Marymount and South Pointe
<table>
<thead>
<tr>
<th>Surgical/Interventional Procedures</th>
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<tbody>
<tr>
<td>Brain Tumor Neuro-Oncology</td>
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<tr>
<td>Cerebrovascular</td>
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<td>Epilepsy</td>
<td>617</td>
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<tr>
<td>Headache and Pain</td>
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<tr>
<td>Neurological Restoration</td>
<td>374</td>
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<tr>
<td>Neuromuscular</td>
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<tr>
<td>Neurosurgery</td>
<td>444</td>
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<tr>
<td>Pediatric Neurology*</td>
<td>46</td>
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<tr>
<td>Pediatric Neurosurgery*</td>
<td>394</td>
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<tr>
<td>Physical Medicine and Rehabilitation</td>
<td>21</td>
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<tr>
<td>Regional Neurological Institute</td>
<td>317</td>
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<tr>
<td>Spine</td>
<td>3,900</td>
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<table>
<thead>
<tr>
<th>Neuroimaging Studies***</th>
<th>98,276</th>
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<tr>
<td>Total CT Brain Scans</td>
<td>37,000</td>
</tr>
<tr>
<td>Total MR Brain Procedures</td>
<td>56,000</td>
</tr>
<tr>
<td>Total Cerebral Angio Procedures</td>
<td>5,276</td>
</tr>
</tbody>
</table>

*** Studies performed across the entire Cleveland Clinic health system
Department of Physical Medicine and Rehabilitation Overview

The Department of Physical Medicine and Rehabilitation is committed to delivering world-class rehabilitation services. This entails providing superior physician and therapy services to our patients, and pursuing innovation in our clinical practice.

The Department of Physical Medicine and Rehabilitation is part of the Neuroscience Institute, one of 26 institutes at Cleveland Clinic that group multiple specialties together to provide collaborative, patient-centered care. The department offers full cross-disciplinary rehabilitation for people with physical, psychosocial, cognitive and vocational impairments. Patients receive coordinated care across a continuum that spans inpatient rehabilitation, skilled nursing and outpatient therapy at Cleveland Clinic facilities throughout the region.

Cleveland Clinic Rehabilitation Hospitals

Cleveland Clinic’s adult rehabilitation units have completed a five-year process of transformation. With the January 2011 opening of new inpatient rehabilitation hospital and therapy facilities on our main campus, a $5 million expansion at Lakewood Hospital and additional facilities at Euclid Hospital, Cleveland Clinic Rehabilitation Hospitals now offers integrated services on three campuses, with 98 adult acute rehabilitation beds strategically located to serve the patients of our healthcare system. Rounding out our complement of hospital services is Cleveland Clinic Children’s Hospital for Rehabilitation; ensuring a full range of treatment that is appropriate for patients of any age.

Our rehabilitation hospitals serve a patient mix that includes regional, national and international referrals, in line with the scope of Cleveland Clinic’s world-renowned tertiary-care services. We provide specialized care for patients who need intensive rehabilitation after hospitalization for stroke, spinal cord injury, traumatic brain injury, major illness, organ transplant, surgery or trauma.

This system-based approach to acute inpatient rehabilitation is bolstered by Cleveland Clinic faculty that provide 24/7 in-house physician coverage at each location, a coordinated fiscal/management structure and an integrated knowledge/information management system. An experienced team of senior therapists, including physical, occupational, speech/language and recreational therapists works with a team of rehabilitation nurses, specialized psychologists and social workers/case managers. This approach results in personalized patient care, better outcomes and access to innovative, disease-based treatment pathways for acute rehabilitation patients throughout our system.

Because of the convenience of multiple locations, patients who require acute inpatient rehabilitation following surgery, illness or injury can choose the location closest to their homes or visiting family members. Because all of the rehabilitation hospitals are centrally coordinated and in constant communication with each other, patients are assured of receiving the same high level of care at any of the three locations. Likewise, referring physicians can trust they will receive communications and updates on the progress of their patients.
Cleveland Clinic Rehabilitation and Sports Therapy

The Department of Physical Medicine and Rehabilitation, in concert with Cleveland Clinic Rehabilitation and Sports Therapy, engage multidisciplinary teams of researchers and clinicians who are targeting the development of a seamless system of services extending from the acute hospital through post-acute treatment and home care. Our special programs are patient-centered and are built around disease conditions, transcending traditional barriers between hospital, nursing home and outpatient care.

Our team of over 650 specialty-trained occupational, physical and speech therapists is dedicated to improving patients’ function and quality of life. More than 45 outpatient facilities offer state-of-the-art rehabilitation equipment and the space needed for advanced functional therapy techniques.

Our specialized therapy services include:
- Amputee rehabilitation
- Aquatic rehabilitation
- Audiology and hearing aid rehabilitation
- Cancer rehabilitation
- Chronic pain rehabilitation
- Cognitive rehabilitation
- Driver’s evaluation and rehabilitation
- Falls prevention therapy
- Hand and upper extremity rehabilitation
- Huntington’s disease rehabilitation
- Low-vision services
- Lymphedema rehabilitation
- Neurological rehabilitation
- Orthopaedic and musculoskeletal rehabilitation
- Osteoporosis rehabilitation
- Parkinson’s disease rehabilitation
- Pelvic floor & incontinence rehabilitation
- Return to work services
- Spine injury and back pain rehabilitation
- Sports rehabilitation
- Vestibular rehabilitation
- Wound care
## Get With The Guidelines® (GWTG) Stroke Performance and Quality Measures

<table>
<thead>
<tr>
<th>Clinical Measure</th>
<th>Measure Description</th>
<th>GWTG Stroke Performance Award Goal</th>
<th>National Average*</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV rt-PA 2 Hour</td>
<td>Acute stroke patients who arrive at the hospital within 120 minutes (2 hours) of time last known well and for whom IV rt-PA was initiated at this hospital within 180 minutes (3 hours) of time last known well.</td>
<td>85.0% 75.9% 66.7% (4/6) 88.9% (8/9) 78.6% (11/14) 86.7% (13/15)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Early Antithrombotics</td>
<td>Patients with ischemic stroke or TIA who receive antithrombotic therapy by the end of hospital day 2.</td>
<td>85.0% 96.7% 97.7% (173/177) 95.3% (261/274) 97.5% (392/402) 95.7% (396/414)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antithrombotics at Discharge</td>
<td>Patients with ischemic stroke or TIA prescribed antithrombotic therapy at discharge (e.g., warfarin, aspirin, other antiplatelet drug).</td>
<td>85.0% 97.8% 98.6% (352/357) 99.7% (346/347) 99.3% (534/538) 99.6% (562/564)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticoagulation for Atrial Fibrillation/ Flutter</td>
<td>Patients with ischemic stroke or TIA with atrial fibrillation/flutter who are discharged on anticoagulation therapy.</td>
<td>85.0% 93.5% 97.2% (35/36) 98.4% (62/63) 98.7% (78/79) 97.7% (84/86)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>DVT Prophylaxis</td>
<td>Patients with ischemic stroke, TIA or a hemorrhagic stroke and who are non-ambulatory who receive DVT prophylaxis by end of hospital day 2.</td>
<td>85.0% 91.8% 93.5% (217/232) 97.4% (261/268) 94.8% (507/535) 93.8% (410/437)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipids Measure (Statin at Discharge)</td>
<td>Ischemic stroke or TIA patients with LDL &gt; 100, or LDL not measured, or on cholesterol-reducer prior to admission, discharged on cholesterol-reducing drugs.</td>
<td>85.0% 89.2% 83.2% (228/274) 88.1% (230/261) 97.2% (350/360) 97.1% (370/381)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking Cessation Counseling</td>
<td>Patients with ischemic, TIA or hemorrhagic stroke with a history of smoking cigarettes, who are, or whose caregivers are, given smoking cessation counseling during hospital stay.</td>
<td>85.0% 96.8% 100% (101/101) 92.4% (109/118) 92.9% (234/252) 99.5% (204/205)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysphagia Screening</td>
<td>Patients with ischemic or hemorrhagic stroke who undergo screen for dysphagia with an evidence-based bedside testing protocol approved by the hospital before being given any food, fluids, or medications by mouth.</td>
<td>85.0% 78.5% -- 67.9% (256/377) 73.7% (490/665) 84.8% (519/612)</td>
<td></td>
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<tr>
<td>Stroke Education</td>
<td>Patients with ischemic, TIA or hemorrhagic stroke or their caregivers who were given education and/or educational materials during the hospital stay.</td>
<td>85.0% 81.3% -- 41.4% (164/396) 80.6% (286/355) 89.9% (310/345)</td>
<td></td>
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</tr>
<tr>
<td>Rehabilitation Considered</td>
<td>Patients with ischemic or hemorrhagic stroke who were assessed for rehabilitation services.</td>
<td>85.0% 96.6% 83.3% (30/36) 98.5% (393/399) 96.5% (684/709) 92.5% (593/641)</td>
<td></td>
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</tbody>
</table>

**Get With The Guidelines® (GWTG)** is the premier hospital-based quality improvement program for the American Heart Association and the American Stroke Association, empowering healthcare provider teams to consistently treat stroke patients using current evidence-based guidelines. Cleveland Clinic is the recipient of the GWTG Stroke Gold Plus Performance Achievement Award and uses the GWTG aggregate comparative data for internal quality improvement. Rates are taken from the GWTG-Joint Commission Primary Stroke Center Reporting Tool, “Consensus-GWTG/PAA set,” as of February 15, 2011.

Inpatient Rehabilitation for Stroke

Length of Stay Efficiency for Stroke Inpatient Rehabilitation

2007 – 2010

Change in FIM Score/LOS

Outcomes are shown for all stroke patients at Cleveland Clinic Rehabilitation Hospitals using the Uniform Data System for Medical Rehabilitation (UDS-MR) data set (Rehabilitation Impairment Category/RIC Group 01). Length of stay (LOS) efficiency compares the functional improvement (FIM) gains made during the rehab stay with the length of stay required to make the gains (FIM change/LOS). Data are aggregated from Cleveland Clinic Rehabilitation Hospitals at Fairview (25 beds), Lakewood (15 beds) and Euclid (46 beds) hospitals, compared to the national average, and are case-mix adjusted by the UDS-MR database. Case mix values for each unit are: 1.51 at Euclid, 1.31 at Fairview and 1.4 at Lakewood. Data suggest that Cleveland Clinic Rehabilitation Hospitals return patients to a higher level of function in a shorter time than the national average.
Depression, Anxiety and Stress before and after IMATCH (N = 92)

2010

Scores on measures of stress, anxiety and depression all decreased following IMATCH, indicating improvement (P < 0.0001). Mean DASS-42 subscale scores are plotted with their standard deviations.

Patient Satisfaction with IMATCH (N = 92)

2010

Average scores on the Treatment Helpfulness Questionnaire (maximum score = 5) indicate high rates of patient satisfaction.
Interdisciplinary Method for the Assessment and Treatment of Chronic Headache (IMATCH)

One of only a few such programs in the country, IMATCH is an intensive, multidisciplinary outpatient program for chronic headache patients who have exhausted other treatment options.

As part of IMATCH, patients are seen daily by physical therapists in the Department of Physical Medicine and Rehabilitation for group cardiovascular, strengthening and stretching exercises. Patients also meet twice each week with physical therapists specially trained in the treatment of headaches and neck pain for individualized exercise and manual techniques aimed at reducing their symptoms. In addition to the Headache Impact Test and Pain Disability Index, disability is measured with the Headache Disability Index (HDI), the Dizziness Handicap Index (DHI) and the Neck Disability Index (NDI).

Disability Status before and after Physical Therapy with IMATCH (N = 92)

Pain disability, measured across multiple instruments, decreased following completion of the IMATCH program (all P < 0.0001). Lower scores indicate less severe disability.
Outpatient Physical Medicine and Rehabilitation

Improvement in Quality of Life Following Outpatient Physical Medicine and Rehabilitation

Both the Musculoskeletal and Neurological patient groups experienced statistically significant ($P < 0.05$) improvement in quality of life, as measured with the EQ-5D. Mean duration between visits was 86.1 days for Musculoskeletal and 111.4 days for Neurological patient groups. Musculoskeletal diagnoses include spondylosis, lumbago, back pain, disc disorders, spinal stenosis, and joint disorders, with spine-related disorders accounting for more than 45 percent of all outpatient encounters with board-certified physiatrists. Neurological conditions include disorders of the central nervous system (hemiplegia, multiple sclerosis, cerebral palsy, movement disorders), disorders of the peripheral nervous system (muscular dystrophy, peripheral neuropathy, mononeuritis), and pain.

Improvement in Depressive Symptoms Following Outpatient Physical Medicine and Rehabilitation

At last follow-up visit, both the Musculoskeletal and Neurological patient groups experienced statistically significant ($P < 0.05$) improvement in depressive symptoms, as measured with the PHQ-9. Mean duration between visits was 96.2 days for Musculoskeletal and 120.1 days for Neurological patient groups.
Occupational Rehabilitation Program

The Work Conditioning Program is accredited by the Commission on Accreditation of Rehabilitation Facilities (CARF). Meeting three to five times per week for up to eight weeks, the program uses physical reconditioning and job simulation/real work tasks to help injured workers regain optimal function so they can return to work.

The Occupational Rehabilitation Program is a CARF-accredited multidisciplinary, individualized therapy program (five days per week, up to eight weeks). The program assists injured workers in returning to work through progressive physical conditioning, work simulation and vocational and psychosocial interventions. An on-site job analysis is performed and recommendations for accommodation to the work environment are made to minimize the risk of reinjury.

Work Readiness Following the Work Conditioning and Occupational Rehabilitation Programs

2010

Patients Work Ready (%)

<table>
<thead>
<tr>
<th>Patients Work Ready (%)</th>
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</thead>
<tbody>
<tr>
<td>After Completing Work Conditioning</td>
</tr>
<tr>
<td>After Completing Occupational Rehabilitation</td>
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</tbody>
</table>

Patients in both programs had primarily musculoskeletal (spine, upper extremity and lower extremity) diagnoses. “Work ready” indicates the percentage of patients who either returned to work, are in search of a job or are otherwise unemployed but capable of working upon discharge from their respective program. Some patients progress from the Work Conditioning Program to an occupational rehabilitation program prior to returning to work.
**Inpatient Physical Therapy**

**Improvement in Functional Status Following Inpatient Physical Therapy**

2010

The graph illustrates the changes in our patients’ ability to perform certain functional tasks such as bed mobility, dressing and transfer. Patients admitted to the acute hospital were evaluated at admission to the acute care unit and at discharge. Fifty percent of our acute care patients improved their ability to perform the three functional tasks. Data were obtained from MediLinks rehabilitation clinical information system.

For the following three graphs, the patient’s ability to independently perform these tasks was scored as follows: independent or supervised = patient was able to perform the task independently or with some supervision; moderate to minimum assist = patient required assistance; and total or maximum assist = patient required total to maximum assistance from caregivers to perform the task. The goal of rehabilitation is to enable patients to become more independent in performing activities of daily living. Data were obtained from MediLinks rehabilitation clinical information system.

**Improvement in Bed Mobility with Acute Inpatient Rehabilitation (N = 4,026)**

2010

The ability to perform bed mobility, a functional task, was evaluated at admission to the acute care unit and at discharge from the unit. At the end of the acute hospital stay, the number of patients with a high level of independence doubled and the number of patients with a medium level of independence decreased from 85 percent at admission to 68 percent.
The ability to dress independently, a functional task, was evaluated at admission to the acute care unit and at discharge from the unit. At the end of the acute hospital stay, the number of patients with a high level of independence increased three-fold, and the number of patients with a medium level of independence decreased from 91 percent at admission to 70 percent.

The ability to transfer, a functional task, was evaluated at admission to the acute care unit and at discharge from the unit. At the end of the acute hospital stay, the number of patients with a high level of independence doubled and the number of patients with a medium level of independence decreased from 75 percent at admission to 49 percent.
QuickDASH (Disabilities of the Arm, Shoulder and Hand) is a widely used tool in both clinical and research settings and has proven to be a useful self-report outcome measure for people with musculoskeletal upper-limb disorders. The QuickDASH uses 11 items to measure physical function and symptoms in people with one or more multiple musculoskeletal disorders of the upper limb. The scores range from 0 to 100, and a higher score indicates greater disability. Patients seen by Cleveland Clinic occupational therapists had an initial QuickDASH score of 45.6. At discharge, the score had decreased significantly (P < 0.005) to 13.9. Mean duration between visits was 85 days.
Cleveland Clinic Care at Home: Hospital Readmission Rates

March 2008 – March 2010

Cleveland Clinic Care at Home compared favorably with other home healthcare providers nationally and within the state of Ohio, in terms of percent of home healthcare patients requiring readmission to the hospital. The leading causes for readmission were cardiopulmonary disease and wound complications. On average, 2,880 patients per quarter are served by Cleveland Clinic Care at Home. Transitional Care Programs, such as Heart Care at Home and Go Right Home focus care on transitioning patients successfully to the home after acute care discharge. The data above demonstrate a level of success in our ability to keep our patients at home once they are discharged from the hospital.

Source: www.medicare.gov/HomeHealthCompare
Providing information and communicating with patients and families are critical for optimal patient outcomes. Hospice at Home has met or exceeded all national benchmarks from the National Hospice and Palliative Care Organization (NHPCO).
Cleveland Clinic Infusion Pharmacy at Home

Infusion Pharmacy at Home is a licensed pharmacy that provides medications, nutritional support, infusion pumps, supplies and comprehensive infusion therapy management to patients in their homes. Traditional infusion pharmacy services include antibiotics, chemotherapy, immune globulin, pain medications and enteral/parenteral nutrition. Diagnoses of patients served include infections, multiple sclerosis, cancer and cancer-related pain, gastrointestinal disease, nutritional deficiencies, congestive heart failure and immune disorders.

Patient Satisfaction with Infusion Pharmacy Services

2010

<table>
<thead>
<tr>
<th>Patients Rating Overall Service as Very Good or Excellent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Quarter 2010 69</td>
</tr>
<tr>
<td>2nd Quarter 2010 77</td>
</tr>
<tr>
<td>3rd Quarter 2010 72</td>
</tr>
<tr>
<td>4th Quarter 2010 85</td>
</tr>
</tbody>
</table>

N = 100

Respiratory Therapy at Home

Patient Satisfaction with Home Respiratory Therapy

2010

<table>
<thead>
<tr>
<th>Patients Rating Overall Service as Very Good or Excellent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Quarter 2010 66</td>
</tr>
<tr>
<td>2nd Quarter 2010 59</td>
</tr>
<tr>
<td>3rd Quarter 2010 63</td>
</tr>
<tr>
<td>4th Quarter 2010 85</td>
</tr>
</tbody>
</table>

N =

Traditional respiratory services include home oxygen, nebulizers and aerosol medications for treatment of obstructive sleep apnea, emphysema, chronic bronchitis, asthma and compromised heart function. Cleveland Clinic provides a growing population of sleep apnea patients with CPAP and BiPAP equipment and supplies.
“Patients First” is the guiding principle of Cleveland Clinic. Patient experience is a key component of Cleveland Clinic’s strategic plan to achieve a coordinated delivery model that integrates patient and family-centered care with clinical outcomes, quality, safety and employee experience.

The Office of Patient Experience’s mission is to ensure consistent, patient-centered care by partnering with caregivers to exceed the expectations of patients and families. Programs and services include:

- Expertise for critical initiatives throughout the organization to ensure the consistent delivery of patient-centered care
- Patient satisfaction data analysis, HCAHPS education and resources
- Identification and sharing of sustainable best practices
- Support of employee experience and recognition initiatives
- Customer service education programs, including the Respond with H.E.A.R.T.® service recovery program, to positively impact the Cleveland Clinic culture and support caregivers in providing outstanding service to patients, families and colleagues
- Personalized, holistic Healing Services for patients, families and employees including light massage, Reiki, Healing Touch™, reflexology, personal aromatherapy, guided imagery, spiritual support, Code Lavender first-response holistic care service and others
- Health literacy education and solutions
- Voice of the Patient Advisory Councils, an advisory resource that empowers patients and families to take an active role in improving the patient experience by providing real-time feedback and creative solutions to specific challenges
- Ombudsman Office, which serves as a centralized complaint center

Outpatient – Neurological Institute

**Overall Rating of Outpatient Care and Services During Outpatient Visit (N = 2,682)**

<table>
<thead>
<tr>
<th>Percent</th>
<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Very Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Press Ganey, a national hospital survey vendor
Rating of Outpatient Care Provider (N = 2,682)
2010

Percent

Source: Press Ganey, a national hospital survey vendor

Likelihood of Recommending Outpatient Care Provider (N = 2,682)
2010

Percent

Source: Press Ganey, a national hospital survey vendor
Inpatient – Neurological Institute

With the support of the Centers for Medicare & Medicaid Services (CMS) and its partner organizations, the first national standard patient experience hospital survey (HCAHPS) was implemented in late 2006. Results collected for reporting are available at hospitalcompare.hhs.gov.

HCAHPS Overall Assessment
2009 – 2010

![Bar chart showing HCAHPS Overall Assessment from 2009 to 2010.]

Source: Press Ganey, a national hospital survey vendor

HCAHPS Domains of Care
2009 – 2010

![Bar chart showing HCAHPS Domains of Care from 2009 to 2010.]

Source: Press Ganey, a national hospital survey vendor
Cleveland Clinic Experience — Our Mission, Vision and Values

In 2010, the Office of Patient Experience worked in collaboration with several departments, including the Office of Learning and Performance Development, to introduce “Cleveland Clinic Experience” to every employee across the organization. Cleveland Clinic Experience is an initiative designed to enhance and transform the culture at Cleveland Clinic by integrating exceptional employee and patient experiences. Interactive learning sessions taught caregivers the Cleveland Clinic expected service behaviors, how to positively respond to patient and family concerns, and what it means to live the Cleveland Clinic mission, vision and values on the job every day.
“The Neurological Institute staff authored more than 650 publications in 2010.”

For a complete list of publications authored by Neurological Institute staff in 2010, go to clevelandclinic.org/quality/outcomes
Department of Physical Medicine and Rehabilitation


Designing the Hip Flexion Assist Device

The Hip Flexion Assist Device (HFAD) was designed through a collaboration between a Mellen Center physical therapist and local orthotists to help patients with multiple sclerosis who suffer from unilateral or bilateral hip flexor, knee flexor and ankle dorsiflexor weakness. The typical presenting gait includes “dragging” of the leg, which in some cases may be corrected with an ankle foot orthosis (AFO) if the weakness is primarily in the ankle dorsiflexors. In many other cases, however, due to weakness in the flexors of the hip and knee, an AFO is insufficient and the user may still present with an unsatisfactory dragging of the leg. This combination of distal and proximal weakness is the scenario in which the HFAD is most effective.

The HFAD uses elastic tension bands that anchor proximally to a waist belt and attach distally to a strap that fits under the shoelaces. The tension may be adjusted to allow symmetrical toe clearance between each leg as the user swings the leg through during normal gait. The device can be worn with or without a popliteal strap. The popliteal strap connects the tension bands posterior to the knee and improves knee flexion as the toe pushes off from the floor to take a step. For example, the popliteal strap is quite effective for patients with prominent extensor tone in the affected leg, which may impair effective knee flexion. The device is most effective when combined with gait training with a physical therapist.

An uncontrolled pilot study conducted at the Mellen Center found the HFAD to be safe and effective in improving ambulation speed, endurance and quality of life. The Mellen Center is currently enrolling patients in a randomized, controlled study to further examine the safety and efficacy of the HFAD to improve walking in MS patients. This two-year study plans to enroll 88 participants and is funded through a grant from the National Multiple Sclerosis Society.
Developing New Methods of Treating Chronic Pain after Spinal Cord Injury

Chronic pain, which disturbs behavioral function and reduces quality of life, has emerged as a major challenge in treating spinal cord injury (SCI). There is currently no cure for chronic pain and oral pharmaceutical interventions are often inadequate, commonly resulting in a slight reduction in pain intensity. Furthermore, addiction and abuse due to continuous administration have become important clinical issues. These facts signal an urgent need to develop a new intervention to treat chronic SCI pain.

After single extracellular matrix (ECM) treatment in the animal SCI model, we developed a novel and effective ECM strategy to inhibit mechanical allodynia, an indicator of chronic SCI pain, over an eight-month observation period. The data, when compared with the vehicle-treated group, showed less blood-spinal cord barrier (BSB) permeability and decreased glial fibrillary acidic protein (GFAP)- and ED1-immunopositive reactivity at the lesion site as well as the areas both rostral and caudal to the lesion site. Additionally, this treatment can modulate the sprouting of 5-HT- and CGRP-positive fibers in laminae I and II of the spinal dorsal horn that mediate pain. Collectively, results from our studies have demonstrated that one-time ECM treatment can modulate nociceptive signaling and lessen inflammation, offering a potential therapeutic strategy to treat chronic pain development after SCI and the neuropathic and/or inflammatory pain caused by other diseases.

Investigating a New Modality to Prevent Deep Vein Thrombosis and Enhance Fibrinolysis

Each year, 600,000 patients experience venous thromboembolism, with at least 50,000 and perhaps as many as 200,000 dying from blood clots that obstruct blood flow to their lungs (pulmonary embolism). The total cost per patient for objective diagnosis and treatment of acute venous thromboembolic disease has been estimated at approximately $4,000, and does not include costs for patients who incur long-term sequelae. Functional magnetic stimulation (FMS) using a magnetic coil and applying a time-varying magnetic field has been demonstrated to be an effective modality for preventing deep vein thrombosis (DVT) and enhancing fibrinolysis.

Vernon Lin, MD, PhD, and his team have demonstrated that FMS can produce a sustained enhancement of systemic fibrinolysis that may prove useful in DVT prophylaxis. The advantages of FMS include painless and noninvasive stimulation because the magnetic field generated can penetrate high-resistance structures such as bone, fat, skin, clothes and leg casts.

However, the device used for FMS is bulky and difficult to secure to a patient during clinical applications. In the case of DVT, the coils must be secured in an optimal location, between the knee and ankle, to provide the desired stimulative effect. Also, the FMS coils generate heat during stimulation and can cause blisters if they touch the patient’s skin.

We have proposed a design that provides a method for securing the coil in an optimal position, prevents any contact with the skin and dissipates the heat generated by the coil during stimulation. The components of this design include magnetic stimulator (any commercially available model), stimulating coil (commercially available circular model), contoured coil positioning and securing system, cooling system and control unit. The proposed design can easily be adjusted to various body sizes and applications and is portable, reusable and easy to maintain.
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Guangxiang Yu, MD
Some physicians may practice in multiple locations. For a detailed list including staff photos, please visit clevelandclinic.org/staff.
Contact Information

General Patient Referral
24/7 hospital transfers or physician consults
800.553.5056

Neurological Institute Appointments/Referrals
216.636.5860 or toll-free 866.588.2264

On the Web at clevelandclinic.org/neuroscience

Additional Contact Information

General Information
216.444.2200

Hospital Patient Information
216.444.2000

General Patient Appointments
216.444.2273 or 800.223.2273

Referring Physician Center
For help with service issues, information about clinical specialists and services, details about CME opportunities and more
216.448.0900 or 888.637.0568, or email refdr@ccf.org

Request for Medical Records
216.444.2640 or 800.223.2273, ext. 42640

Medical Concierge
Complimentary assistance for out-of-state patients and families 800.223.2273, ext. 55580, or email medicalconcierge@ccf.org

Global Patient Services/International Center
Complimentary assistance for international patients and families 001.216.444.8184 or visit clevelandclinic.org/gps

Cleveland Clinic Florida
Toll-free 866.293.7866

For address corrections or changes, please call 800.890.2467
Cleveland Clinic Neurological Institute physicians see patients at the locations below. Please inquire about the availability of specific services at each location when calling.

**Cleveland Clinic Main Campus**
9500 Euclid Ave.
Cleveland, OH 44195
Toll-free 866.588.2264

**Avon Lake Family Health Center**
450 Avon Belden Road
Avon Lake, OH 44012
440.930.6800

**Beachwood Family Health and Surgery Center**
26900 Cedar Road
Beachwood, OH 44122
216.839.3000

**Broadview Heights Family Health Center**
2001 East Royalton Road
Broadview Heights, OH 44147
216.986.4000

**Brunswick Family Health Center**
3574 Center Road
Brunswick, OH 44212
330.225.8886

**Chagrin Falls Family Health Center**
551 E. Washington St.
Chagrin Falls, OH 44022
440.893.9393

**Cleveland Clinic Children’s Hospital Shaker Campus**
2801 Martin Luther King Jr. Drive
Cleveland, OH 44104
216.721.5400

**Cleveland Clinic Nevada**
Lou Ruvo Center for Brain Health
888 W. Bonneville Ave.
Las Vegas, NV 89106
702.483.6000

**Cleveland Clinic Nevada**
Lou Ruvo Center for Brain Health
890 Mill St., Suite 102
Reno, NV 89502
775.337.6200
<table>
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<th>Hospital</th>
<th>Address</th>
<th>City, OH</th>
<th>Phone</th>
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<tr>
<td>Euclid Hospital</td>
<td>18901 Lake Shore Blvd.</td>
<td>Euclid</td>
<td>216.692.8586</td>
</tr>
<tr>
<td>Fairview Hospital</td>
<td>18101 Lorain Ave.</td>
<td>Cleveland</td>
<td>216.476.7000</td>
</tr>
<tr>
<td>Hillcrest Hospital</td>
<td>6780 Mayfield Road</td>
<td>Mayfield</td>
<td>440.312.4500</td>
</tr>
<tr>
<td>Huron Hospital</td>
<td>13951 Terrace Road</td>
<td>East Cleveland</td>
<td>216.761.3300</td>
</tr>
<tr>
<td>Independence Family Health Center</td>
<td>5001 Rockside Road</td>
<td>Independence</td>
<td>216.986.4000</td>
</tr>
<tr>
<td>Lakewood Hospital</td>
<td>14519 Detroit Ave.</td>
<td>Lakewood</td>
<td>216.529.7110</td>
</tr>
<tr>
<td>Lorain Family Health and Surgery Center</td>
<td>5700 Cooper Foster Park Road</td>
<td>Lorain</td>
<td>440.204.7400</td>
</tr>
<tr>
<td>Lutheran Hospital</td>
<td>1730 W. 25th St.</td>
<td>Cleveland</td>
<td>216.696.4300</td>
</tr>
<tr>
<td>Marymount Hospital</td>
<td>12300 McCracken Road</td>
<td>Garfield</td>
<td>216.581.0500</td>
</tr>
<tr>
<td>Medina Hospital</td>
<td>1000 E. Washington St.</td>
<td>Medina</td>
<td>330.725.1000</td>
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Solon Family Health Center
29800 Bainbridge Road
Solon, OH 44139
440.519.6800

South Pointe Hospital
20000 Harvard Ave.
Warrensville Heights, OH 44122
216.491.6000

Strongsville Family Health and Surgery Center
16761 SouthPark Center
Strongsville, OH 44136
440.878.2500

Twinsburg Family Health and Surgery Center
8701 Darrow Road
Twinsburg, OH 44087
330.888.4000

Westlake Family Health Center
30033 Clemens Road
Westlake, OH 44145
440.899.5555

Willoughby Hills Family Health Center
2570 SOM Center Road
Willoughby Hills, OH 44094
440.943.2500

Wooster Family Health and Surgery Center
1739 Cleveland Road
Wooster, OH 44691
330.287.4500
About Cleveland Clinic

Overview

Cleveland Clinic is a nonprofit multispecialty academic medical center that integrates clinical and hospital care with research and education. Today, more than 2,500 Cleveland Clinic physicians and scientists practice in more than 100 medical specialties and subspecialties, annually recording more than 1.5 million physician visits and more than 70,000 surgeries. Cleveland Clinic currently has the highest CMS case-mix index in America. Patients come for treatment from every state and from more than 80 countries annually.

Cleveland Clinic's main campus, with 50 buildings on 180 acres in Cleveland, Ohio, includes a 1,300-bed hospital, outpatient clinic, specialty institutes and supporting labs and facilities. Cleveland Clinic also operates 16 family health centers, nine community hospitals, one affiliate hospital, a rehabilitation hospital for children, Cleveland Clinic Florida, the Lou Ruvo Center for Brain Health in Las Vegas, and Cleveland Clinic Canada. Cleveland Clinic Abu Dhabi (United Arab Emirates), a multispecialty care hospital and clinic, is scheduled to open in 2012. With 41,000 employees, Cleveland Clinic is the second largest employer in Ohio, and is responsible for an estimated $9 billion of economic activity every year.

The Cleveland Clinic Model

Cleveland Clinic was founded in 1921 by four physicians who had served in World War One and hoped to replicate the organizational efficiency of military medicine. The organization has grown through the years by adhering to the model set forth by the founders. All Cleveland Clinic staff physicians receive a straight salary with no bonuses or other financial incentives. The hospital and physicians share a financial interest in controlling costs and profits are reinvested in research and education.

In 2007, Cleveland Clinic restructured its practice, bundling all clinical specialties into integrated practice units called institutes. An institute combines all the specialties surrounding a specific organ or disease system under a single roof. Each institute has a single leader and focuses the energies of multiple professionals onto the patient. From access and communication to billing and point-of-care service, institutes are improving the patient experience at Cleveland Clinic.

Cleveland Clinic Lerner Research Institute

At the Cleveland Clinic Lerner Research Institute, hundreds of principal investigators, project scientists, research associates and postdoctoral fellows are involved in laboratory-based, translational and clinical research. Total annual research expenditures exceed $272 million from federal agencies, non-federal societies and associations, endowment funds and other sources.

Cleveland Clinic physicians, scientists, fellows, residents and other employees are involved in more than 3,000 human-subject research activities at any given time.

Cleveland Clinic Lerner College of Medicine

Now in its seventh year of existence, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University offers all students full-tuition scholarships. The program graduated its first 29 students as physician-scientists in 2009.

U.S. News & World Report Ranking

Cleveland Clinic is consistently ranked among the top hospitals in America by U.S. News & World Report, and our heart and heart surgery program has been ranked No. 1 since 1995.

For more information about Cleveland Clinic, please visit clevelandclinic.org.
Referring Physician Center
For help with service-related issues, information about our clinical specialists and services, details about CME opportunities and more, contact the Referring Physician Center at refdr@ccf.org, or 216.448.0900 or 888.637.0568.

Critical Care Transport Worldwide
Cleveland Clinic's critical care transport team and fleet of mobile ICU vehicles, helicopters and fixed-wing aircraft serve critically ill and highly complex patients across the globe.

To arrange a transfer for STEMI (ST elevated myocardial infarction), acute stroke, ICH (intracerebral hemorrhage), SAH (subarachnoid hemorrhage) or aortic syndromes, call 877.379.CODE (2633).

For all other critical care transfers, call 216.444.8302 or 800.553.5056.

Request Medical Records
216.444.2640 or 800.223.2273, ext. 42640

Track Your Patient's Care Online
DrConnect offers referring physicians secure access to their patients' treatment progress while at Cleveland Clinic. To establish a DrConnect account, visit clevelandclinic.org/drconnect or email drconnect@ccf.org.

Medical Records Online
Cleveland Clinic continues to expand and improve electronic medical records (EMRs) to provide faster, more efficient and accurate care by sharing patient data through a highly secure network. Patients using MyChart can renew prescriptions and review test results and medications from their own personal computer. MyChart offers a secure connection to Google™ Health, where users can securely share personal health information with Cleveland Clinic and record and share details of their Cleveland Clinic treatment with the physicians and healthcare providers of their choice. To establish a MyChart account, visit clevelandclinic.org/mychart.

Remote Consults
Online medical second opinions from Cleveland Clinic's MyConsult are particularly valuable for patients who wish to avoid the time and expense of travel. Cleveland Clinic offers online medical second opinions for more than 1,000 life-threatening and life-altering diagnoses. For more information, visit clevelandclinic.org/myconsult, email eclevelandclinic@ccf.org or call 800.223.2273, ext. 43223.

CME Opportunities: Live and Online
Cleveland Clinic’s Center for Continuing Education operates one of the largest and most successful CME programs in the country. The center’s website (ccfcme.com) is an educational resource for healthcare providers and the public. Available 24/7, it houses programs that cover topics in 30 areas — if not from A to Z, at least from Allergy to Wellness — with a worldwide reach. Among other resources, the website contains a virtual textbook of medicine (Disease Management Project), a medical newsfeed refreshed daily, and myCME, a system for physicians to manage their CME portfolios. Live courses, however, remain the backbone of the center’s CME operation. Most live courses are held in Cleveland, but outreach plans are under way. In 2010, the center offered 11 simultaneous courses at Arab Health, a major world healthcare forum, in Dubai, United Arab Emirates.
This project would not have been possible without the commitment and expertise of many individuals, but in particular Jocelyn Bautista, MD; Irene Katzan, MD; Christine Moore; and John Urchek.