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 Services (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, and we invite your feedback. Please send comments and suggestions to us at OutcomesBookFeedback@ccf.org. To view all our Outcomes books, please visit Cleveland Clinic’s Quality and Patient Safety website at clevelandclinic.org/outcomes.
Dear Colleague:

Welcome to Cleveland Clinic’s 2011 Outcomes books. They include data on clinical outcomes, patient volumes, innovations and publications. Cleveland Clinic pioneered the collection and annual publication of outcomes data. This initiative has become part of the national discussion on lowering costs and improving the quality of healthcare.

Cleveland Clinic uses data to manage outcomes across the full continuum of care. Clinical services are delivered through patient-centered institutes, each based around a single disease or organ system. Institutes combine medical and surgical services, along with research and education, under unified leadership. Each institute defines quality benchmarks for its specialty services and reports longitudinal progress.

Cleveland Clinic Outcomes books are available in print and online. Additional data is available through our online Quality Performance Report (clevelandclinic.org/QPR). The site offers data in advance of national and state public reporting sites in key areas, including heart attack, heart failure, stroke and infection prevention.

We hope you will find this information useful.

Sincerely,

Delos M. Cosgrove, MD
CEO and President
## what’s inside

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**Quality and Outcomes Measures**

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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,

Cleveland Clinic has made a priority of assessing the results and outcomes of our treatments. I am pleased to present our ongoing effort to collect data and measure results to improve quality, promote safety and produce the best outcomes for our patients.

When Cleveland Clinic reorganized specialties into institutes around organ and disease systems, the Head & Neck Institute was established to diagnose and treat complex disorders of the ear, nose, throat and mouth. The Head & Neck Institute combines the expertise of otolaryngologists, oral surgeons, dentists, audiologists and voice specialists to provide multidisciplinary care for a broad range of adult and pediatric patients with head and neck disorders. This book provides a snapshot of what that collaboration produced for our patients in 2011, in terms of both outcomes data and notable developments in our institute's programs and offerings.

Highlights of our program development include the further rollout of our Transoral Robotic Surgery Program, which was established in late 2010. This leading-edge program is helping to set the standard for optimal use of robot-assisted surgery for benign and malignant diseases of the oropharynx, larynx and parapharyngeal space.

The past year also was notable for continued expansion of our hearing implant program, which puts us at the forefront of cochlear implant and bone-anchored implant technology and hearing rehabilitation for patients of all ages. Similarly, we are among the leading centers in offering the new SoundBite™ device for patients with single-sided deafness, a management option that draws on our multidisciplinary collaboration between otologists, audiologists and dentists.

Additional developments in 2011 included the strengthening of our offerings in specialized care for the professional voice through our Voice Center as well as significant large-scale research evaluating treatment options for patients with laryngotracheal stenosis. The latter research initiative has been made possible by our large volume of these patients and our collaboration with colleagues in Cleveland Clinic's world-renowned vasculitis program.

I invite you to take a look within to learn more about these and our other initiatives and outcomes in 2011. Please let us know if we can partner with you in meeting your patients' needs for ear, nose, throat, mouth or voice care. As always, we welcome your comments.

Michael S. Benninger, MD
Chairman, Head & Neck Institute
Institute Overview

In 2011, Cleveland Clinic’s otolaryngology program was ranked as the No. 8 ear, nose and throat program in the country by *U.S. News & World Report* in its annual “America’s Best Hospitals” survey, achieving the best ranking in Ohio.

The otolaryngology program is part of Cleveland Clinic’s Head & Neck Institute, a comprehensive, multidisciplinary institute that also includes general dentistry, oral and maxillofacial surgery, prosthodontics, periodontics, speech language pathology and audiology. More than 40 faculty members in the institute pool their talents and expertise to achieve excellence in education, research and patient outcomes.

### 2011 Statistics

- **Total Patient Visits**: 98,294
- **Total Patients New to Cleveland Clinic**: 2,512
- **Primary Surgical Cases**: 5,174
- **Admissions**: 819
- **Average Relative Value Units (RVUs)**: 5,970
- **Number of Days’ Wait for a New Patient Appointment**: 9
- **Operating Margin**: 15%
Economic Value Associated with Two-Sound Therapy Tinnitus Treatment Options

A cost-utility analysis allows economic value comparisons to be made between interventions. The cost per quality of life years gained, expressed as the metric quality-adjusted life years (QALY), is based on cost of treatment, life expectancy and benefit derived from the intervention.

The Tinnitus Handicap Inventory (THI) was used to assess treatment benefit, as shown in the graph below. Lower scores on the THI represent less perceived tinnitus handicap.

Mean Benefit Score for Tinnitus Treatment Options

2011

The mean THI score for baseline and six-month postfitting of Sound Generators (SGs) and Neuromonics® tinnitus treatment (NTT) show equivalent benefit gained for each treatment option.
The cost per QALY was calculated for two-sound therapy tinnitus management options including ear-level SGs and NTT. SGs use a broadband noise to provide tinnitus masking and to promote habituation of the tinnitus perception. NTT employs spectrally modified music in an acoustic desensitization approach to help patients overcome the disturbing consequences of tinnitus.

**Cost per Quality-Adjusted Life Years Gained**

<table>
<thead>
<tr>
<th>Dollars</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuronomics Tinnitus Treatment</td>
<td>Neuromonics Tinnitus Treatment</td>
</tr>
<tr>
<td>2,000</td>
<td>1,600</td>
</tr>
<tr>
<td>1,200</td>
<td>800</td>
</tr>
<tr>
<td>400</td>
<td>0</td>
</tr>
<tr>
<td>23</td>
<td>33</td>
</tr>
</tbody>
</table>

The overall cost per QALY gained is more favorable for the SGs compared to the NTT; however, both sound therapy options are well below the $50,000/QALY benchmark considered to be a very cost-effective healthcare intervention (Brown and Brown, 2005).

Facial Plastic and Reconstructive Surgery

Free Flap Survival (N = 538)
2001 – 2011

Percent

*Cleveland Clinic
National Average*

*National average based on the cumulative average of five major studies referenced below:


Free Flap Operative Times (N = 538)

2003 – 2011

Flap Inset and Microvascular Anastomosis Time
(Total Minutes Added to Planned Cancer Surgical Procedures)

*National average based on the cumulative average of five major studies referenced below:


Free Flap Distribution (N = 731)
2002 – 2011

- 3% Serratus Rib
- 3% Rectus
- 3% Latissimus
- 27% Anterolateral Thigh
- 25% Fibula
- 39% Forearm
Length of Stay for Patients Undergoing Free Flap Reconstruction (N = 96)

2011

Days

Cleveland Clinic *National Average United States *National Average Europe
0 5 10 15 20 25

*National average based on the cumulative average of four major studies referenced below:


General Otolaryngology

Post-Tonsillectomy Bleeding with or without Adenoidectomy (Pediatric and Adult) (N = 522)

The above graph includes patients under 18 (pediatric) and those 18 and over (adult) in both ambulatory and inpatient settings.

*In reviewing two large studies, the incidence of bleeding can vary from 1.6 percent to 3.9 percent (pediatrics compared to adults).


Speech Recognition Ability among Bimodal (Cochlear Implant and Hearing Aid), Bilateral Cochlear Implant and Unilateral Cochlear Implant Patients

In 2011, a new Minimum Speech Test Battery for determination of cochlear implant (CI) candidacy was released and includes more challenging test materials designed to be reflective of real-life listening environments (AzBio Sentences) as compared to simpler historic measures (HINT sentences).

Research suggests that individuals with residual hearing and the ability to use a hearing aid in the contralateral ear (bimodal recipients) may outperform unilateral recipients. Our outcomes (N = 20) illustrate that patients with greater residual hearing at time of implantation (bimodal recipients, pure tone average 81.9 dB) demonstrate greater speech recognition improvement more quickly and are better equipped to handle more challenging test materials than individuals with less residual hearing at time of implantation (unilateral CI and bilateral CI recipients, pure tone average 97.4 dB). These outcomes confirm the importance of early identification and referral for CI evaluation.
Overall Speech Recognition Ability (N = 20)

2011

Percent Correct

Pre-Operative Performance

One Month Post-Operative Performance

Best Post-Operative Performance

Bimodal (CI+HA)

Bilateral CI

Unilateral CI
Speech Recognition Performance as a Function of Device and Test Measure (N = 20)

2011

Percent Correct

AzBio Sentences  HINT Sentences

Test Measure

Device Mode
- Bimodal (CI+HA)
- Bilateral CI
- Unilateral CI
Base of the Tongue (BOT) Squamous Cell Carcinoma Overall Survival Rate, Stages III and IV (N = 196)

1997 – 2011

The Kaplan-Meier test for overall survival rate for BOT patients has a log rank (Mantel-Haenszel) test $P$ value of 0.37 and a Wilcoxon test (Peto & Peto modification of the Gehan-Wilcoxon test) $P$ value of 0.29, which means no significant association was found between stages and overall survival rate based on the BOT patient data.

Base of the Tongue (BOT) Squamous Cell Carcinoma Disease-Specific Survival Rate, Stages III and IV (N = 196)

1997 – 2011

The Kaplan-Meier test for overall survival rate for BOT patients has a log rank (Mantel-Haenszel) test $P$ value of 0.35 and a Wilcoxon test (Peto & Peto modification of the Gehan-Wilcoxon test) $P$ value of 0.35, which means no significant association was found between stages and disease-specific survival rate based on the BOT patient data.
Nasopharynx Carcinoma Overall Survival Rate, Stages I, II, III and IV (N = 64) 1997 – 2011

The Kaplan-Meier test for overall survival rate for nasopharynx patients has a log rank (Mantel-Haenszel) test $P$ value of 0.03 and a Wilcoxon test (Peto & Peto modification of the Gehan-Wilcoxon test) $P$ value of 0.04, which means a significant association was found between stages and overall survival rate based on the nasopharynx patient data.

Nasopharynx Carcinoma Disease-Specific Survival Rate, Stages I, II, III and IV (N = 64) 1997 – 2011

The Kaplan-Meier test for overall survival rate for nasopharynx patients has a log rank (Mantel-Haenszel) test $P$ value of 0.02 and a Wilcoxon test (Peto & Peto modification of the Gehan-Wilcoxon test) $P$ value of 0.03, which means there was a significant association found between stages and the disease-specific survival rate based on the nasopharynx patient data.
Complications of Office-Based Laryngology Procedures

2011

<table>
<thead>
<tr>
<th>Complication</th>
<th>Vocal Cord Injection (N = 78)</th>
<th>532-nm Pulsed Potassium Titanyl Phosphate (KTP) Laser (N = 33)</th>
<th>Electromyogram (EMG) Guided Laryngeal Botox Injection (N = 203)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hematoma</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Superficial Injection</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aborted Procedure Due to Patient Intolerance</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Lidocaine Toxicity</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Topical Anesthesia Complication</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Office-based laryngology procedures have become more common. They represent an opportunity for surgeons and appropriately selected patients to receive treatment without undergoing general anesthesia, with the subsequent costs and associated work absences. This renaissance in laryngology has certainly been experienced at Cleveland Clinic as the Section of Laryngology and the Voice Center have expanded.

Patient comfort and tolerance of these procedures is very good. The group complication rates for the past year are low and have included no major complications.
Dental implants are routinely placed in the jaw bones to replace missing teeth or provide greater retention for removable prostheses (dentures, partials, etc.). Many of our patients are undergoing rehabilitation from cancer or tumors of the oral cavity.

Our success rates continue to be above 90 percent for patients with a history of head and neck radiation and other severely compromising medical conditions.
Within the group above, 56 percent of the cases are revision or multiple revision surgical procedures, with 23 percent representing multiple revised ears. Of the revision cases, three were planned second-stage procedures (10 percent), and 26 (90 percent) of the cases were referred to the Section of Neurotology for revision surgery.
In primary surgeries, only 35 percent of cases required a canal wall down procedure. However, when looking only at revision surgery, 80 percent of cases required canal wall down surgery.

Hearing Results for Primary and Revision Surgical Procedures: Air Bone Gap  (N = 20)

In the primary cases, the average residual air bone gap after surgery was 18 dB. In the revision and multiple revision cases, a good hearing result is still possible with an average of 24 dB, and 20 dB, respectively. Post-operative hearing data was only available on 37 percent of the patients (N = 20).
Using a multidisciplinary approach and open communication between the team and patients, pediatric Wegener’s patients have been managed effectively through medical therapy and airway dilation, avoiding tracheostomies, open airway procedures and airway complications.
### Vestibular and Balance Disorders

#### Vestibular Testing Results (N = 1,051)

<table>
<thead>
<tr>
<th>2011</th>
<th>Patient Age</th>
<th># of Airway</th>
<th>Type of Procedures</th>
<th># of Open Procedures</th>
<th># of Tracheostomies</th>
<th># of Complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>0</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>0</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>2</td>
<td>Dilation</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>0</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>18</td>
<td>0</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>0</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>19</td>
<td>2</td>
<td>Dilation/Kenalog/Mitomycin C</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>19</td>
<td>2</td>
<td>Dilation/Kenalog/Mitomycin C; Lysis of Scar Band</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>17</td>
<td>0</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>1</td>
<td>Dilation/Kenalog/Mitomycin C</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Totals**
- 7 procedures
- 0 open procedures
- 0 tracheostomies
- 0 complications

**Percentages do not equal 100 percent as some patients had more than one result.**

- **19%** Unilateral Vestibular Weakness (N = 195)
- **17%** Benign Paroxysmal Positional Vertigo (BPPV) (N = 174)
- **3%** Both Unilateral Weakness and BPPV (N = 32)
- **2%** Bilateral Vestibular Weakness (N = 17)
- **7%** Central Abnormalities (N = 71)
- **58%** Normal (N = 610)
Patients undergoing endoscopic sinus surgery had very favorable outcomes and rarely experienced complications. The majority of these cases were revision procedures and were successfully performed using surgical navigation on an outpatient basis.

### Surgical Outcomes and Complications of Endoscopic Sinus Surgery

#### 2011

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age (years)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Number of Patients</td>
<td>278</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>153</td>
<td>55</td>
</tr>
<tr>
<td>Female</td>
<td>125</td>
<td>45</td>
</tr>
<tr>
<td>Image Guidance</td>
<td>210</td>
<td>75</td>
</tr>
<tr>
<td>CC Hospital-based OR</td>
<td>170</td>
<td>61</td>
</tr>
<tr>
<td>CC Ambulatory Surgery Center</td>
<td>108</td>
<td>39</td>
</tr>
<tr>
<td>Outpatient/23-Hour Observation</td>
<td>247</td>
<td>89</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Complication</th>
<th>N</th>
<th>%</th>
<th>Long-Term Sequelae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intracranial Injury</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Orbital Injury (Major)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Orbital Injury (Minor)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mucocele</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Epistaxis (Major)</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Synechiae, Requiring Repeat OR</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Postoperative Pain Syndrome</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Anesthetic Complication</td>
<td>1</td>
<td>0.004</td>
<td>0</td>
</tr>
</tbody>
</table>
In addition to caring for patients with nasal and sinus disorders, our rhinologists also provide renowned expertise in the minimally invasive management of lesions affecting the skull base and orbit.
Primary vs. Secondary Tracheoesophageal Puncture (TEP) Fitting: A Comparison of Voice Restoration and Complications (N = 20)

2011

Primary TEP voice restoration has been a highly successful and cost-effective approach to re-establishing voice and speech in laryngectomized patients at Cleveland Clinic since the early 1990s.

In 2011, as an effort to improve patient comfort and early speech outcomes, the Head & Neck Institute modified the traditional approach of using a red rubber catheter to stent the newly created TEP and facilitate tube feeding during the early post-operative phase. Instead, we began by placing the initial voice prosthesis during the TEP surgery.

Preliminary findings for this different approach suggest that the elimination of the TEP catheter stenting has significantly reduced complications, restored speech by the first speech pathology visit, and virtually eliminated post-operative ER visits.
Time from Diagnosis to Complete Recovery of Voice for Patients with Functional Dysphonia (N = 43)

2011

**Patient Demographics**  
<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>5</td>
</tr>
<tr>
<td>Females</td>
<td>38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Average</th>
<th>Median</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>44</td>
<td>44</td>
<td>13 to 80</td>
</tr>
</tbody>
</table>

Functional dysphonia is a voice problem in the absence of anatomical abnormalities or vocal fold pathology. This disorder can mimic a number of other conditions (from neurological problems to acute laryngitis), making it difficult to diagnose. Traditional voice therapy has been uneven and generally unsuccessful. This accounts for the long interval between onset of symptoms and vocal recovery. Our program has been very successful at identifying the condition and providing intervention that results in complete recovery of voice, usually following a single intervention.

<table>
<thead>
<tr>
<th>Mean Time from Onset to Diagnosis</th>
<th>Weeks</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>81.07</td>
<td>18.92</td>
</tr>
<tr>
<td>Median</td>
<td>29.43</td>
<td>6.87</td>
</tr>
<tr>
<td>Range</td>
<td>0 to 686</td>
<td>0 to 160</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean Time from Diagnosis to Complete Recovery of Voice 1 to 2 Treatment Sessions</th>
<th>Weeks</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>0.49</td>
<td>0</td>
</tr>
<tr>
<td>Median</td>
<td>0.00</td>
<td>0</td>
</tr>
<tr>
<td>Range</td>
<td>0 to 14</td>
<td>0 to 3.5</td>
</tr>
</tbody>
</table>

| % Recurrence | 11.6% (N = 5) |
**National Surgical Quality Improvement Program**

The American College of Surgeons’ National Surgical Quality Improvement Program (NSQIP) objectively measures and reports risk-adjusted surgical outcomes based on a defined sampling and abstraction methodology. The outcome data below and on the opposite page reflect Cleveland Clinic’s surgical cases between July 1, 2010, and June 30, 2011.

**Overall Multispecialty 30-Day Mortality (N = 4,643)**

*July 2010 – June 2011*

Overall multispecialty mortality was lower than expected; the difference was statistically significant.
Otolaryngology 30-Day Morbidity (N = 262)

July 2010 – June 2011

Otolaryngology surgery morbidity was lower than expected; however, the difference was not statistically significant.
Cleveland Clinic is dedicated to delivering excellent clinical outcomes and the best possible experience for our patients and their families. Patient feedback is critical in driving priorities and assessing results. Based on this feedback, Cleveland Clinic’s Office of Patient Experience implements training programs to improve service and communication as well as educational initiatives to help patients understand what to expect when they are in our care.

**Outpatient — Head & Neck Institute**

**Overall Rating of Outpatient Care and Services During Outpatient Visit**

**2010 – 2011**

![Bar chart showing the percent of patients rating their care as Very Good, Good, Fair, Poor, and Very Poor for 2010 (N = 965) and 2011 (N = 1,546).]

Source: Press Ganey, a national hospital survey vendor
**Rating of Outpatient Care Provider**
*2010 – 2011*

**Likelihood of Recommending Outpatient Care Provider**
*2010 – 2011*

Source: Press Ganey, a national hospital survey vendor
Inpatient — Head & Neck Institute

The Centers for Medicare and Medicaid Services (CMS) requires United States hospitals that treat Medicare patients to participate in the national Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, a standardized tool that measures patients’ perspectives of hospital care. Results collected for public reporting are available at hospitalcompare.hhs.gov.

HCAHPS Overall Assessment
2010 – 2011

Source: Press Ganey, a national hospital survey vendor
HCAHPS Domains of Care
2010 – 2011

Source: Press Ganey, a national hospital survey vendor
Selected Publications

Head & Neck Institute
staff authored
more than 45 publications
in 2011.

For a complete list, go to
clevelandclinic.org/outcomes.


Lesner SA, Sandridge SA, Newman CW. Becoming a better preceptor: The adult learner. *Hear J.* 2011 Sep;64(9):29-34.


Staff Listing

**Institute Chairman**
Michael S. Benninger, MD

**Institute Vice Chairman**
Brian Burkey, MD

**Institute Quality Review Officer**
Raj Sindwani, MD

**Institute Patient Experience Officer**
Troy Woodard, MD

**Audiology Section**
Craig Newman, PhD

*Section Head*
Donald Goldberg, PhD
Sharon Sandridge, PhD

*Director, Audiology Clinical Services*
Sarah Sydlowski, AuD, PhD

*Audiology Director, Hearing Implant Program*

*Some physicians may practice in multiple locations. For a detailed list including staff photos, please visit clevelandclinic.org/staff.*
Dentistry Section
Michael Matheis, DDS
Section Head
Todd Coy, DMD
Residency Program Director
Betty Haberkamp, DDS
Richard Harper, DDS
Karen A. Kahn, DDS
Rex Raper, DDS

Facial Plastic and Reconstructive Surgery Section
Daniel Alam, MD
Section Head
Michael Fritz, MD
P. Daniel Knott, MD

General/Regional Otolaryngology Section
Edward Fine, MD, PhD
Section Head
Tom Abelson, MD
Steven Ball, MD
Cristina Cabrera, MD
John Dobrowski, MD
Torbio Flores, MD
Richard Freeman, MD, PhD
Catherine Henry, MD
Robert Katz, MD

Alan Kominsky, MD
Residency Program Director
Matthew McDonnell, MD
Jacob Slepian, MD
Sanford Timen, MD

Head and Neck Surgery and Oncology Section
Brian Burkey, MD
Section Head
Mumtaz Khan, MD
Robert Lorenz, MD
Joseph Scharpf, MD
Benjamin Wood, MD

Laryngology Section
Michael S. Benninger, MD
Paul Bryson, MD

Laryngotraheal Reconstruction Section
Samantha Anne, MD
Michael S. Benninger, MD
Paul Bryson, MD
Brian Burkey, MD
Mumtaz Khan, MD
Paul Krakovitz, MD
Robert Lorenz, MD
Prashant Malhotra, MD
Joseph Scharpf, MD
Staff Listing

**Oral and Maxillofacial Surgery Section**
Jill Weber, DDS  
*Section Head*

Joseph Krajekian, MD, DMD

**Otology-Neurotology Section**
Tom Haberkamp, MD  
*Section Head*

Erika Woodson, MD  
*Medical Director, Hearing Implant Program*

**Pediatric Otolaryngology Section**
Paul Krakovitz, MD  
*Section Head*

Samantha Anne, MD  
Prashant Malhotra, MD

**Research Section**
Brian Gastman, MD  
James Kaltenbach, PhD  
*Director, Otology Research  
Head, Auditory Neurobiology Laboratory*

**Rhinology, Sinus and Skull Base Surgery Section**
Raj Sindwani, MD  
*Section Head*

Michael S. Benninger, MD  
Troy Woodard, MD

**Sleep Disorders Section**
Todd Coy, MD  
John Dobrowski, MD  
Alan Kominsky, MD  
Joe Krajekian, DMD, MD  
Jill Weber, DDS

**Speech and Language Pathology**
Douglas Hicks, PhD  
*Section Head*

Claudio Milstein, PhD

**The Voice Center**
Douglas Hicks, PhD  
*Director*

Tom Abelson, MD  
Michael S. Benninger, MD  
Paul Bryson, MD  
Richard Freeman, MD  
Claudio Milstein, PhD
Vestibular and Balance Disorders Section
Judith White, MD, PhD
Section Head

Head & Neck Institute Anesthesiology
Andrew Zura, MD
Section Head

Basem Abdelmalak, MD
Chanjit Bahniwal, MD
Matvey Bobylev, MD
D. John Doyle, MD
Paul Kempen, MD
Tatyana Kopyeva, MD
Jerome O’Hara, MD
Antonio Ramirez, MD
Contact Information

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

Head & Neck Institute Appointments/Referrals
216.444.8500 or 800.223.2273, ext. 48500

Dentistry Appointments/Referrals
216.444.6907 or 800.223.2273, ext. 46907

On the Web at clevelandclinic.org/hni

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 and Hotline
Cleveland Clinic’s Referring Physician Center has established a 24/7 hotline — 855.REFER.123 (855.733.3712) — to streamline access to our array of medical services. Contact the Referring Physician Hotline for information on our clinical specialties and services, to schedule and confirm patient appointments, for assistance in resolving service-related issues, and to connect with Cleveland Clinic specialists.

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
866.293.7866

For address corrections or changes, please call
800.890.2467
Institute Locations

Cleveland Clinic Main Campus
9500 Euclid Ave.
Cleveland, OH 44195
216.444.8500

Beachwood Family Health and Surgery Center
26900 Cedar Road
Beachwood, OH 44122
216.839.3740

Euclid Medical Office Building
99 Northline Circle
Euclid, OH 44119
216.481.7326

Garfield Heights
5400 Transportation Blvd., Suite 8
Garfield Heights, OH 44125
216.662.3373

Independence Family Health Center
Crown Centre II
5001 Rockside Road
Independence, OH 44131
216.986.4160

Medina Medical Office Building
970 E. Washington St., Suite 6A
Medina, OH 44256
330.723.6673

Parma
Medical Arts II Building
6707 Powers Blvd., Suite 202
Parma, OH 44129
440.842.4800

Severance Medical Center
5 Severance Circle
Cleveland Heights, OH 44118
216.291.1220

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 Medical Campus
850 Columbia Road
Westlake, OH 44145
440.250.5744
Overview

Cleveland Clinic uses a scorecard approach to measure quality, safety and patient experience. In addition, real-time dashboard data are leveraged to drive performance improvement. Although not an exact match to publicly reported data, more timely internal data provide transparency for leaders at all levels of the organization to support improved care in their clinical locations. The following are examples of Cleveland Clinic’s 2011 focus areas and main campus results.

Appropriateness of Care
2010 – 2011

Cleveland Clinic’s goal is for all patients to receive all the recommended care for which they are eligible. An aggregated “all or nothing” measurement approach to monitoring multiple publicly reported process-of-care measures for heart failure, acute myocardial infarction, pneumonia and surgical patients is trending positively.

Mortality
2010 – 2011

Cleveland Clinic’s observed/expected (O/E) mortality ratio outperformed the University HealthSystem Consortium (UHC) academic medical center 50th percentile throughout 2011.

*Source: Performance Accelerator Suite Program maintained by the University HealthSystem Consortium (UHC)
https://www.uhc.edu/
Cleveland Clinic established a 2011 target ICU surveillance rate of 1.33 central line-associated bloodstream infections (CLABSIs) per 1,000 central line days, with the goal of reducing our rate by an additional 50 percent over the 2010 results. This 2011 target was met by the end of the year.

Cleveland Clinic focused on reducing the incidence of 10 Agency for Healthcare Research and Quality PSIs. Cleveland Clinic achieved a reduction of more than 60 percent in the total number of these PSIs in 2011 through a combination of clinical and documentation improvement activities.

* PSI 3 Stage III/IV Pressure Ulcers, PSI 6 Iatrogenic Pneumothorax, PSI 7 CLABSI, PSI 8 Post-Op Hip Fracture, PSI 9 Post-Op Hemorrhage/Hematoma, PSI 11 Post-Op Respiratory Failure, PSI 12 Post-Op PE or DVT, PSI 13 Post-Op Sepsis, PSI 14 Post-Op Wound Dehiscence, PSI 15 Accidental Puncture/Laceration
Hospital-acquired pressure ulcers in Cleveland Clinic ICU patients were below the national average in 2010 and 2011.

Falls in Cleveland Clinic stepdown unit patients were below the national average for most of 2010 and 2011. In 2011, Cleveland Clinic supplemented proactive falls-reduction strategies with after-event huddles to evaluate causality and develop prevention strategies.

*The National Database of Nursing Quality Indicators® (NDNQI®) is owned by the American Nurses Association. The database collects and evaluates unit-specific nurse-sensitive data from hospitals domestically and globally with over 1800 hospitals participating. The comparison data represented here are based on a third of all hospitals in the U.S. participating. © 2012 American Nurses Association, All Rights Reserved. https://www.nursingquality.org/*
Medical Emergency Teams (METs) bring critical care experience to patients across the hospital and provide early intervention that can prevent unplanned transfers to ICUs. As adult MET activations increased from 2009 through 2011, post-event adult ICU transfers decreased.
**Patient Experience — Cleveland Clinic**

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey is the standard national tool for measuring patients’ perspectives of hospital care. Results are available at [hospitalcompare.hhs.gov](http://hospitalcompare.hhs.gov).

**HCAHPS Rate and Recommend Hospital**

*2010 – 2011*

**Percent (Best Response)**

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**Rate Hospital**

- % 9 or 10 (0-10 scale)

**Would Recommend Hospital**

- % “definitely yes”

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**HCAHPS Hospital Domain Scores**

*2010 – 2011*

**Percent (Best Response)**

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“Patients First” is the guiding principle of Cleveland Clinic, which was among the first major academic medical centers to make improving the patient experience a strategic goal. The Office of Patient Experience collaborates with physician and nursing leadership to establish best practices and implement standardized protocols that ensure delivery of patient-centered care. Campus-wide HCAHPS survey results are trending favorably in every domain.
Overview

Cleveland Clinic is a nonprofit multispecialty academic medical center that integrates clinical and hospital care with research and education. Across the health system, 2,800 Cleveland Clinic physicians and scientists practice in 120 medical specialties and subspecialties, annually recording more than 4.6 million physician visits and nearly 188,000 surgeries. Patients come for treatment from every state and from more than 125 countries annually.

Cleveland Clinic’s main campus, with 50 buildings on 180 acres in Cleveland, Ohio, includes a 1,400-bed hospital, outpatient clinic, specialty institutes, and supporting labs and facilities. The hospital currently has the highest CMS case-mix index in America. Cleveland Clinic also operates 18 family health centers, eight community hospitals, one affiliate hospital, a rehabilitation hospital for children, Cleveland Clinic Florida, Cleveland Clinic Lou Ruvo Center for Brain Health in Las Vegas, Cleveland Clinic Canada, and Sheikh Khalifa Medical City. Cleveland Clinic Abu Dhabi (United Arab Emirates), a multispecialty care hospital and clinic, is scheduled to open in 2013. 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 I 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 on the patient. Institutes are improving the patient experience at Cleveland Clinic.
Cleveland Clinic Lerner Research Institute

At the Lerner Research Institute, hundreds of principal investigators, project scientists, research associates and postdoctoral fellows are involved in laboratory-based, translational and clinical research. Total research expenditures from external and internal sources exceeded $240 million in 2010. Research programs include cardiovascular, cancer, neuralgic, musculoskeletal, allergic and immunologic, eye, metabolic, and infectious diseases.

Cleveland Clinic Lerner College of Medicine

Celebrating its 10th anniversary in 2012, the Lerner College of Medicine of Case Western Reserve University is known for its small class size, unique curriculum and full-tuition scholarships for all students. The program graduated 31 students as physician investigators in 2011.

Graduate Medical Education

In 2011, nearly 1,800 residents and fellows trained at Cleveland Clinic and Cleveland Clinic Florida, the most ever hosted by Cleveland Clinic and part of a continuing upward trend.

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 and Hotline

Cleveland Clinic’s Referring Physician Center has established a 24/7 hotline – 855.REFER.123 (855.733.3712) – to streamline access to our array of medical services. Contact the Referring Physician Hotline for information on our clinical specialties and services, to schedule and confirm patient appointments, for assistance in resolving service-related issues, and to connect with Cleveland Clinic specialists.

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.

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 personal computers. MyChart provides a link to Microsoft HealthVault, a free online service that helps patients securely gather and store health information. It connects to Cleveland Clinic’s social media and Internet site, currently the most visited hospital website in America. For more information, visit clevelandclinic.org/mychart.

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 syndrome, call toll-free 877.379.CODE (2633).

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

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) 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 2011, the Center offered 15 simultaneous courses at Arab Health, a major world healthcare forum.
This project would not have been possible without the commitment and expertise of a team led by Raj Sindwani, MD, and Cynthia Cartellone, MHA.
Every life deserves world class care.