

2010 Quality and Outcomes Report

Rose Spine Institute
Rose Institute for Joint Replacement



Welcome to Rose Medical Center

For 60 years, we have been dedicated to offering high quality medical care to our patients. Your patient's health and comfort are our main concern while they are here.

For the third year in a row and the fifth time in the last 10 years, Rose Medical Center was named the nation's 100 Top Hospitals by Thomson Reuters. The award recognizes hospitals that have achieved excellence in clinical outcomes, patient safety, patient satisfaction, financial performance and operational efficiency.

We are proud to be designated as a "Blue Distinction Center for Spine Surgery" and a "Blue Distinction Center for Knee and Hip Replacement" by Blue Cross/Blue Shield. We are also proud to be awarded the Aetna Institute of Quality Orthopedic Care. Criteria for these designations include a comprehensive evaluation of structure, process and outcome measures developed from expert physicians and medical organizations.

All of our employees share a commitment to patient satisfaction and providing outstanding care. If there is anything that we can do to make a patient's stay more comfortable, then we will aim to achieve it. We want to know what we did well, but also what you think we could do differently to make sure we are delivering the quality care and the services you expect from us.

Ken Feiler,
CEO and President





Rose Medical Center

Medical Center is a fully accredited, 422-bed acute care hospital. Each year Rose cares for more than 160,000 patients with a team of 1,300 dedicated employees, 100 volunteers and more than 1,200 physicians .

Well known as a Denver institution and a 9th Ave landmark for 60 years, Rose has earned its reputation as Denver's "baby hospital" while also becoming a leader in comprehensive women's, surgical and endoscopy services, heart and vascular services, orthopedics, total joint replacement, spine, bariatrics, and internal and aesthetic medicine.

Rose was founded with origins in Jewish teachings, traditions and community, with the goal to "serve the need of every creed". By offering a high level of expertise and services across all disciplines, Rose has truly become a destination, attracting patients from throughout Colorado and around the world.

Rose Medical Center was recently named Colorado's only Pathway to Excellence hospital. This designation by the American Nurses Credentialing Center identifies Rose as one of the best places for nurses to work.

Steeped in History

Denver, March 1945 - A Hospital is Born

Before this month ends, the Stars and Stripes will fly over Iwo Jima and U.S. troops will be well on their way to Berlin. After four long years of waiting, wondering and rationing, signs of an Allied victory are growing clearer for those on the home front as well as the front lines.

In Denver, such hopes are the heart of the decision to build a new hospital. The Queen's City's population is soaring, and the need for hospital beds is critical. Members of the Jewish community feel a responsibility to strengthen the city's healthcare resources and provide a practice site for physicians returning from the war. Below are a few of our historical highlights.

- 1945** The hospital committee decides to name the new hospital in honor of General Maurice Rose. A native of Denver, General Rose was killed in action in Europe during the final months of World War II.
- 1947** The Board of Directors votes to build a six-story structure with a patient capacity of 250 beds.
- 1949** General Maurice Memorial Hospital opens its doors "serving the need of every creed".
- 1951** The Women's Division purchases operating room table lights and equipment at a cost of \$14,600.
- 1952** General Rose Memorial Hospital receives its first two-year accreditation as a result of the first survey.
- 1966** Paul Stock of Cody, Wyoming, donates funds for a two-story Pavilion for surgery.
- 1994** The Rose Institute for Joint Replacement is established, along with new programs in Sports Medicine and Men's Health.
- 2008** The Rose Spine Institute program is formalized.
- 2010** The Rose Spine Institute and Rose Institute for Joint Replacement are designated as a Blue Distinction Center for Spine Surgery and Knee and Hip Replacement and as an Aetna Institute of Quality for Orthopedic Care.



March 29, 2010, Rose Medical Center was named one of the nation's 100 Top Hospitals by Thomson Reuters, a leading provider of information and solutions to improve the cost and quality of healthcare.



Designated a "Thomson 100 Hospital"

The award recognizes hospitals that have achieved excellence in clinical outcomes, patients safety, patient satisfaction, financial performance, and operational efficiency.

This is the fifth time Rose has been recognized with this honor and the second year in a row that Rose is the only hospital in Colorado to be awarded this distinction.

The winners were identified through an in-depth analysis the Thomson Reuters 100 Top Hospitals; National Benchmark study. The study evaluated 3,000 short term, acute care, nonfederal hospitals in nine areas: mortality, medical complications, patients safety, average length of stay, expenses, profitability, cash-to-debt ratio, patient satisfaction, and adherence to clinical standards of care.

"The 100 Top Hospitals winners raised the bar again this year, delivering a higher level of reliable care and greater value for their communities" said Jean Chenoweth, Senior Vice President for performance improvement and 100 Top Hospitals programs at Thomson Reuters.

If all Medicare inpatients received the same level of care as Medicare patients treated in the winning hospitals:

- More than 107, 500 additional patients would survive each year
- Nearly 132, 000 patient complications could be avoided annually
- Expenses would decline by 5.9 billion a year
- The average patient stay would decrease by nearly half a day



Jan. 27, 2010 – Blue Cross and Blue Shield has designated Rose Medical Center as a Blue Distinction Center for Spine SurgerySM and a Blue Distinction Center for Knee and Hip ReplacementSM



These designations are part of the Blue Cross and Blue Shield Association's expansion of its Blue Distinction® program.

"The orthopedic and spine programs at Rose are truly leading the way in quality patient care, and this latest designation as Blue Distinction Centers proves that point," said Kenneth Feiler, President and CEO of Rose Medical Center. "Our team focuses on providing the best care for our patients, whether it's our surgeons employing the newest techniques, or our staff keeping the complication and infection rates as low as possible – each person is dedicated to making sure the patient has a top-quality experience." The selection criteria used to evaluate facilities were with input from a panel of expert physicians. To be designated as a Blue Distinction Center for Spine Surgery and a Blue Distinction Center for Knee and Hip Replacement, the following types of criteria were used:

- The presence of an established acute care inpatient facility; including intensive care, emergency care, and a full range of patient support services, with full accreditation by a CMS-deemed national accreditation organization
- Significant experience and training of program surgeons, including considerable case volume
- Demonstrated quality management programs, including surgical checklists, as well as tracking and evaluation of clinical outcomes and processes of care
- Comprehensive multi-disciplinary clinical pathways and teams to coordinate and streamline care, including transitions of care
- Shared decision making and preoperative patient education

More information on selection criteria is available at www.bcbs.com.

Dec. 1, 2010 – Rose Medical Center was designated an Aetna Institute of Quality® (IOQ) Care Facility for Total Joint Replacement and Spine Surgery.



Aetna Institutes of Quality® recognizes Rose Medical Center for consistently delivering evidence-based, quality care for spine and joint treatment.

Institutes of Quality® Orthopedic Care Facilities

Aetna selects hospitals as IOQ based on measures of clinical performance, comprehensive services, access, efficiency of care and the ability to provide both inpatient and outpatient procedures. "This designation from Aetna is a great accomplishment for the spine and orthopedic programs at Rose," said Kenneth Feiler, President and CEO of Rose Medical Center. "We strive to provide the highest quality care for our patients, through our board-certified surgeons and dedicated care teams, and this award shows that our efforts have been succeeding."

By being selected for this designation, the Rose Institute for Joint Replacement and the Rose Spine Institute have met the following criteria:

- Evidence-based and recognized standards for clinical outcomes, processes of care and patient safety
- Comprehensive, ongoing follow-up programs and support for patients
- Demonstrated efficiency in providing care based on overall cost of care, readmission rates and comprehensiveness of the program
- Significant physician experience in orthopedic/ spine care, including annual minimum volumes for knee and hip replacement procedures and spine procedures

More information on the IOQ can be found at www.aetna.com. Additional information on Rose Medical Center can be found at www.rosemed.com



Gary Ghiselli, MD



Sanjay Jatana, MD
Medical Director 2009-2012



Jennifer Kang, MD



Michael Shen, MD



Stephen Shogan, MD

Participating Spine Surgeons at the Rose Spine Institute

We are pleased to present the first annual report on quality endeavors from the Rose Spine Institute. We view quality as the responsibility of all and therefore see our mission as one of sharing knowledge and growing a quality program.

The overall goal is to improve the quality of life for our patients with excellent and safe outcomes of the care we provide. As changes in healthcare are anticipated, our Institute has taken a keen interest in ensuring that we are early adopters of those changes and are transparent in reporting those to our partners and patients.

We hope that this publication will assist you in your department or practice and encourage your ongoing efforts to assure the highest quality patient care. We are available to support your efforts and share our knowledge and continued growth. We hope that you find our 2010 Outcomes book informative and of great value. Please do not hesitate to contact our Spine Institute for further resources and collaboration in the future.

Center of Excellence

Compassionate Care & Advanced Treatments for Neck and Back Pain

The Rose Spine Institute offers the region's best in diagnosis and treatment of spine disorders. Our mission is to provide world-class, compassionate care and service to all patients seeking treatment.

We bring together a highly trained multi-disciplinary team who offers our patients the highest in quality of care, treating each patient with respect and compassion. Our team will coordinate an individualized, comprehensive treatment plan to restore our patients to a full and active lifestyle.

Individual: We consider our patients to be a valuable part of the team as their information, insight and commitment are essential to a rapid and successful recovery.

Integrated: We combine multiple local disciplines in our treatment plans with the understanding that the majority of patients respond to conservative non-operative care.

Innovation: We continually implement best practice methods and latest technology which allow us to achieve a high success rate.

We are proud to offer a comprehensive program with dedicated, highly qualified nursing, physical and occupational staff as well as dedicated case management to our Institute. The care of our patients are first and foremost and therefore have included an advanced nurse practitioner and physician assistant in our program who work closely with our surgeons in carrying out that mission. Our focused approach to spine care means excellent patient safety, better treatment outcomes and a high level of patient satisfaction.

Our surgeons provide very comprehensive surgical services at Rose Medical Center and the Rose Surgical Center. For a complete list of surgeries, please contact our Rose Spine Institute.



(top)

Jan Thomas

Advanced Nurse Practitioner



(bottom)

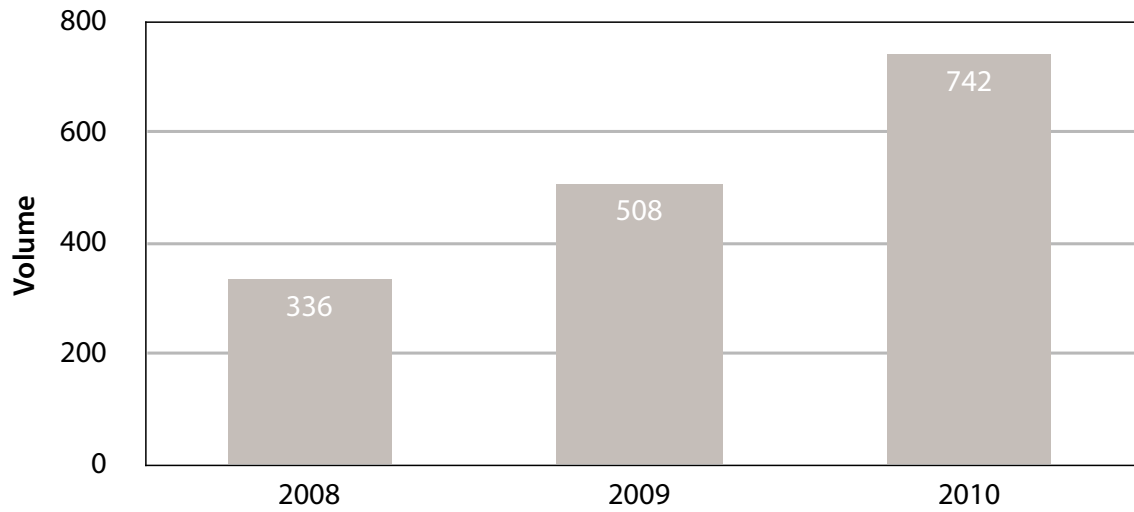
Kim Houkal

Physician Assistant

Volume Equals Quality

Excellence of clinical outcomes are closely related with surgical volumes. Below is our 3 year volume data on commonly performed neuro and spine procedures.

Rose Spine Institute



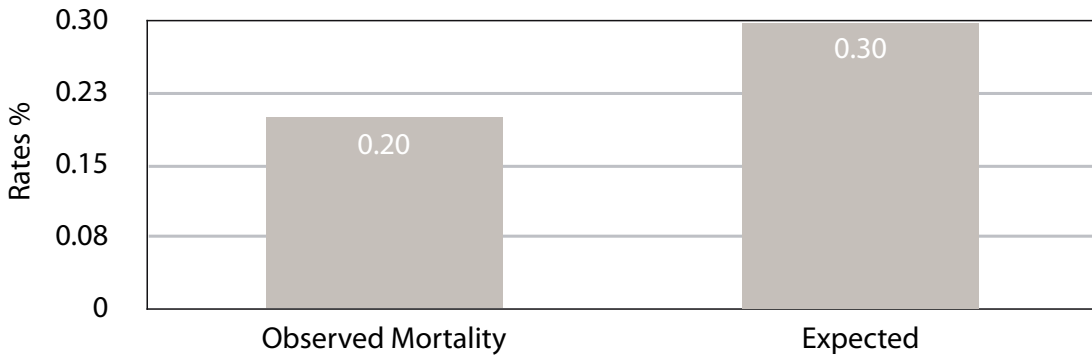
Scoliosis Surgery



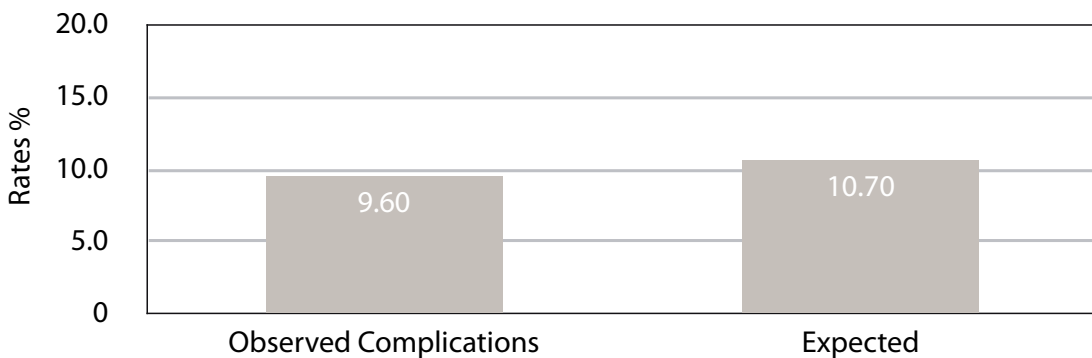
Reporting Outcomes

Outcomes for the Rose Spine Institute are **significantly below** that which is expected for spine-related procedures. Expected rates are based on a risk assessment for our patient population.

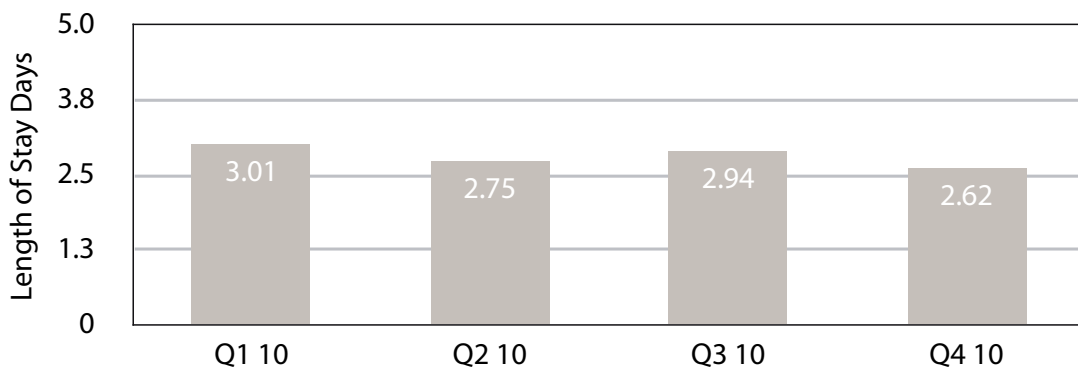
Mortality



Complications



Average Length of Stay

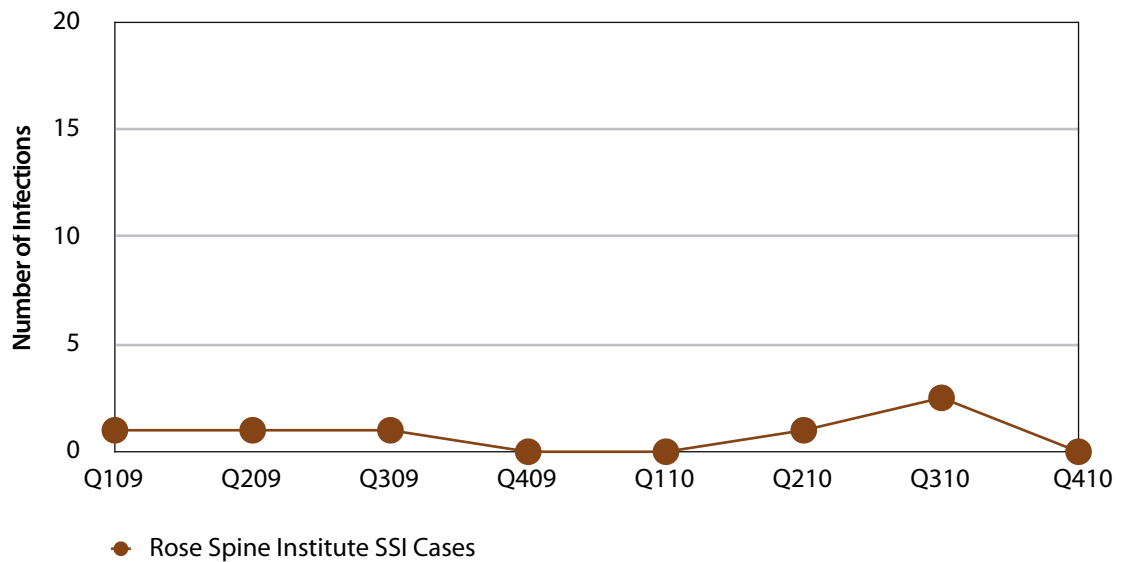


Surgical Site Infections (SSIs)

Recently CMS elevated the prevention of SSIs to a national priority status. We have put a major emphasis on surgical site infections and seek new means at avoiding these complications. In 2010, we had an overall infection rate for all spine procedures of 0.59%. These were significantly below the national average.

*National rates reported for primary surgery is 2.0% and for revision spine surgery is reported at 3.3%. (Smith, J.S., Shaffrey, C.L., et al, Rates of Infections Following Spine Surgery Based on 108, 419 Procedures, A Report from the Scoliosis Research Society Morbidity and Mortality Committee, SPINE 2011)

Rose Spine Institute SSIs



Prodisc Cervical Disc Replacement



Surgical Care Improvement (SCIP) Measures

Outcomes for the Rose Spine Institute are significantly better than average benchmarks. Rates are reported below for the 2010 year and are reflective for all spine procedures.

The Surgical Care Improvement Project (SCIP) is a national quality partnership of 10 steering organizations (including the Joint Commission and the Centers for Medicare and Medicaid Services) dedicated to improving surgical care through the reduction of complications. It is estimated that SCIP protocols will save many lives nationally by reducing the incidence of surgical complications.

Two important SCIP protocols of interest are the prevention/reduction of Venous Thromboembolism (VTE), and the prevention/reduction of Surgical Site Infections. Both have been a major focus of our quality initiatives.

Antibiotics: Critical in Preventing Surgical Infections

Prior to surgery, patients are carefully evaluated and should be chosen a prophylactic antibiotic consistent with national guidelines. Equally important is for timely administration and timely discontinuation. Studies indicate that the optimum timing for prophylactic antibiotics is within one hour prior to incision and the coverage should not be extended beyond 24 hours even if a patient has tubes or drains post operatively.

Successes for the Rose Spine Institute include:

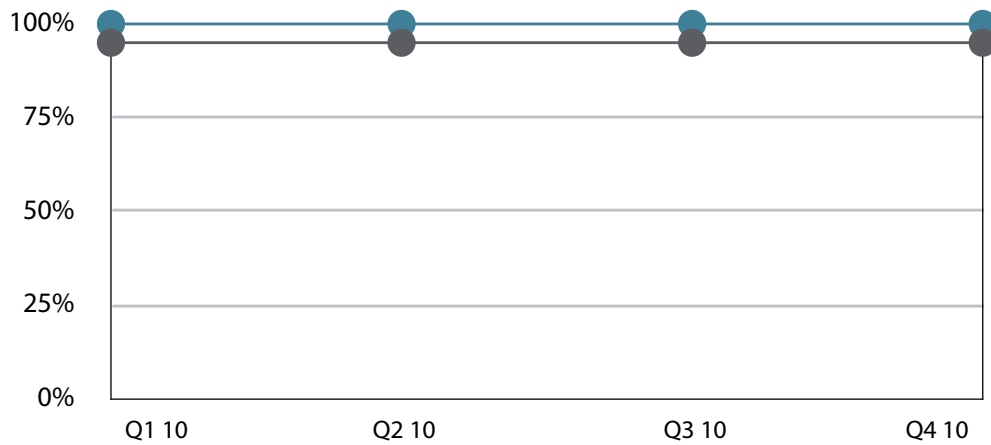
- Revised physician pre-op orders and a developed standard order set to be used for all spine surgeons.
- Monthly Rose Spine Institute operational meetings with our multi-disciplinary team
- Global education to all clinicians providing care to at risk population
- Strict adherence to "Time Out" procedures
- Updating Operating Room preference cards
- Shared information and review at weekly "Core Measures" meetings
- Daily monitoring by a Quality Analyst
- Prophylactic antibiotics primed and hung by Pre-op Holding areas
- Changed order sets to discontinue antibiotics within 24 hrs of surgery end time
- Drill down of misses performed

Surgical Care Improvement (SCIP) Measures

VTE Prophylaxis

VTE is a collective term for Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE). At our Institute, we remain committed to making certain every patient receives the appropriate VTE prophylaxis. We also remain dedicated to making certain every patient receives the appropriate VTE prophylaxis in a timely manner. There are both pharmaceutical prophylaxis and mechanical prophylaxis that can be ordered. The following data on commonly performed spine procedures is displayed below.

Rose Spine Institute

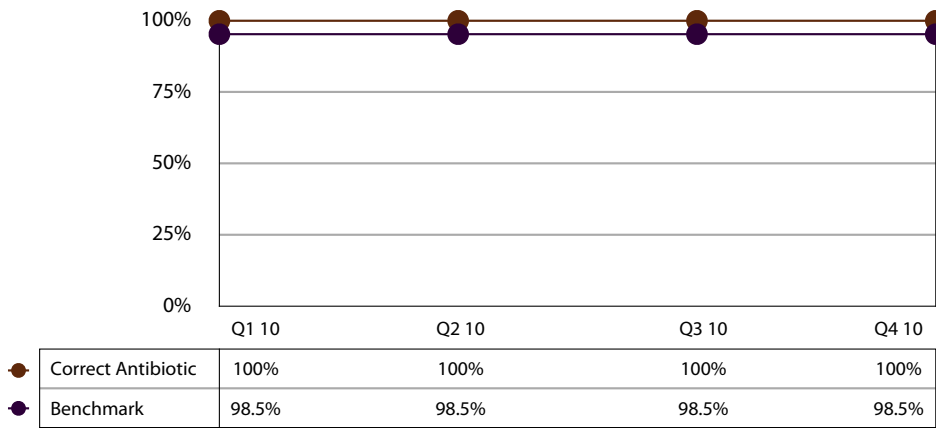


● VTE Prophylaxis	100%	100%	100%	100%
● Benchmark	98.5%	98.5%	98.5%	98.5%

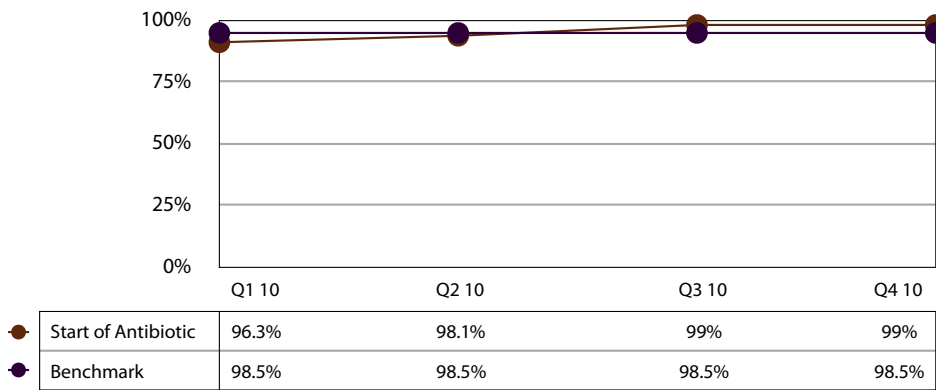
Spondylolisthesis L5-S1 Surgery



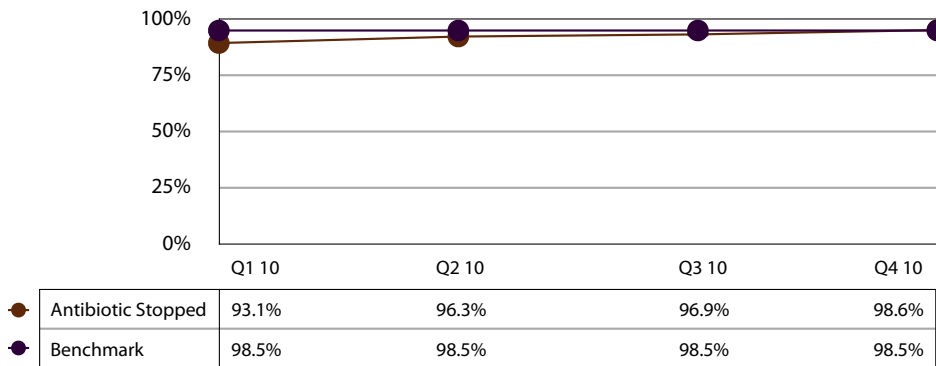
Prophylactic Antibiotic is Correct According to SCIP Guidelines



Antibiotic Start Within One Hour of Procedure



Antibiotic Stopped Within 24hrs of Surgery End Time





Dennis Chang, MD



Hal Crane, MD
Medical Director



Joel Gonzales, MD



Armodios Hatzidakis, MD



Davis Hurley, MD



Eric Lindberg, MD

Participating Orthopedic Surgeons at the Rose Institute for Joint Replacement

Founded in 1994, our vision was to be the leader in joint replacement surgery. Today, that vision is a reality continually driving us to deliver the highest quality health care to our patients.



H. Andrew Motz, MD



John Papilion, MD



Andrew Parker, MD



David Schneider, MD



Steve Traina, MD



Leslie Vidal, MD

One of the fundamental ways we ensure quality at the **Rose Institute for Joint Replacement** is to attract and retain the best, most talented and highly trained surgeons for our patients. Our Medical Director, Executive Committee and Medical Staff President are all involved in ensuring that the right surgeons are chosen.

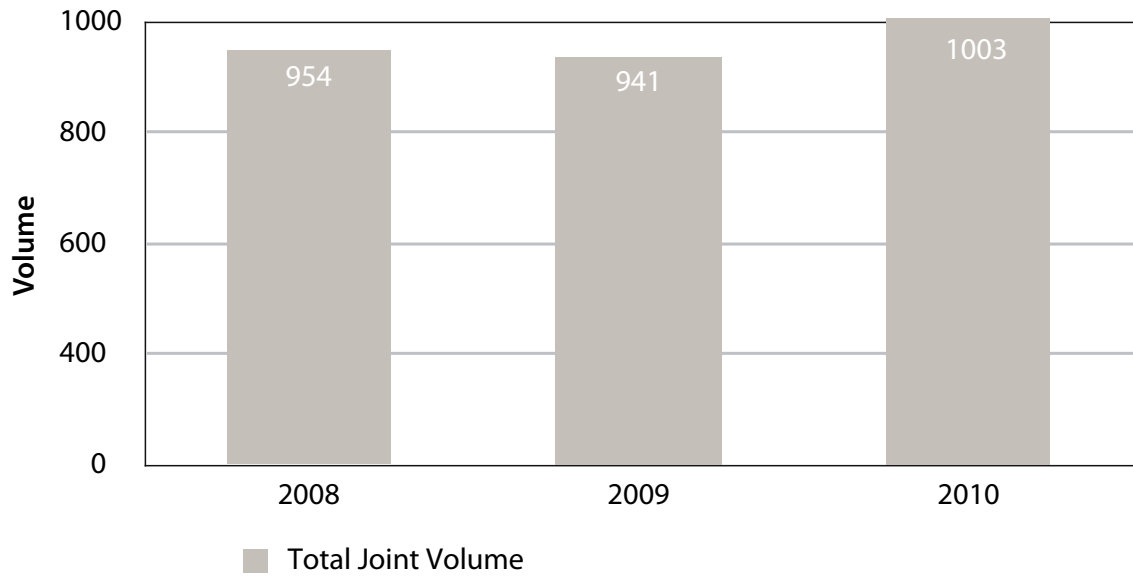
We are proud to be designated a **“Blue Distinction Center for Knee and Hip Replacement”** by Anthem Blue Cross/Blue Shield as well as an **“Aetna Institute of Quality® Care Facility for Total Joint Replacement”**. Designations such as these include a comprehensive evaluation of structure, process and outcome measures developed from expert physicians and medical organizations.

The Rose Institute for Joint Replacement believes that patient centered care and continuous quality improvement efforts are the pressing issues of our time, and as an Institute we remain focused on both. As committed leaders in the field, this publication represents the vision and focus of the entire Institute.

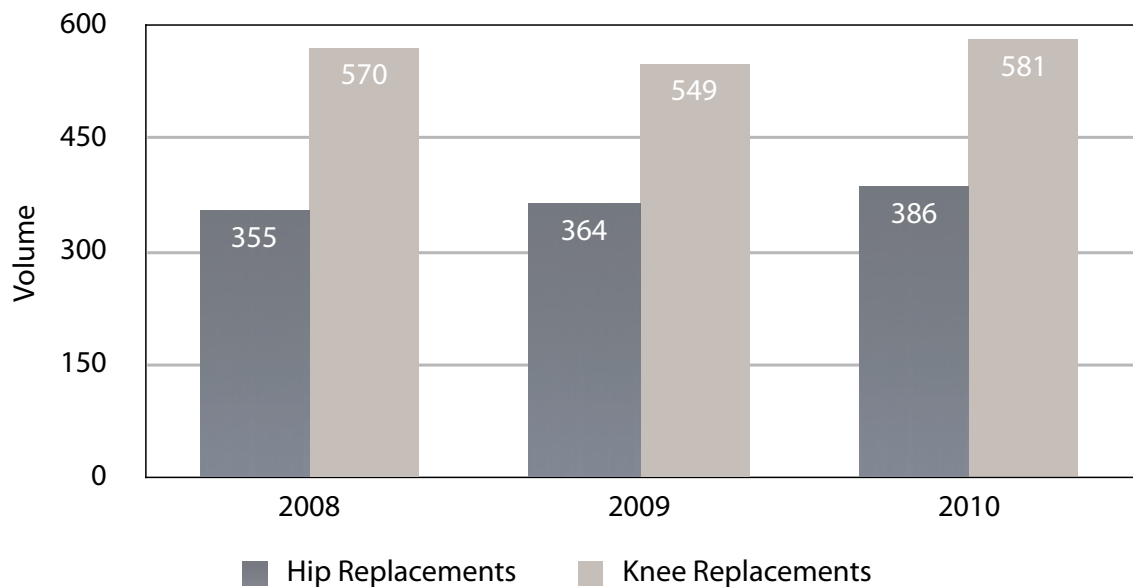
Volume Equals Quality

Excellence of clinical outcomes are closely related with surgical volumes. This also translates into Surgical Care Improvement Project (SCIP) scores that surpass national averages. Our Institute offers comprehensive services in knee, hip and shoulder replacements, as well as elbow, wrist, foot and ankle procedures. Below is our 3 year volume data for all procedures. Volumes for knee and hip replacements are represented in the second graph.

Total Joint Volume



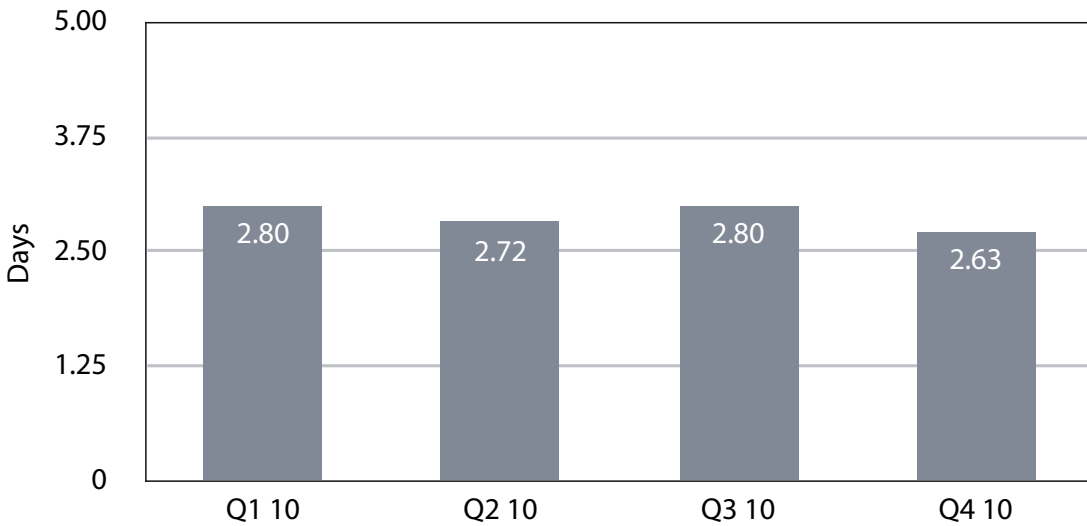
Knee and Hip Replacement Volume



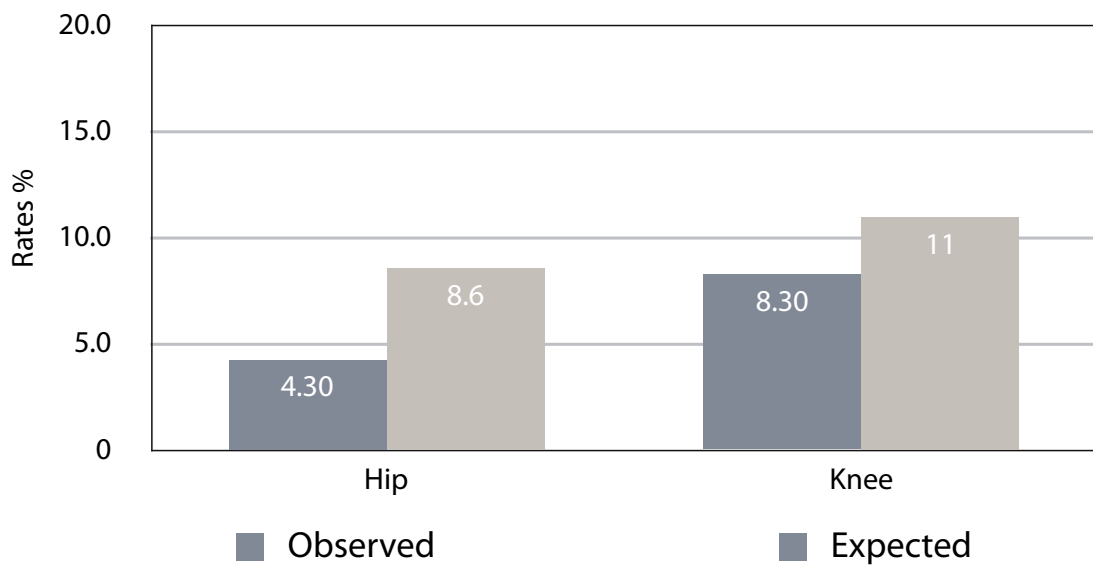
Reporting Outcomes

Outcomes for the Rose Institute for Joint Replacement are significantly below that expected for total joint replacements. Expected complications rates are based on a risk assessment of our patient population. Rates reported below for the 2010 year.

Average Length of Stay



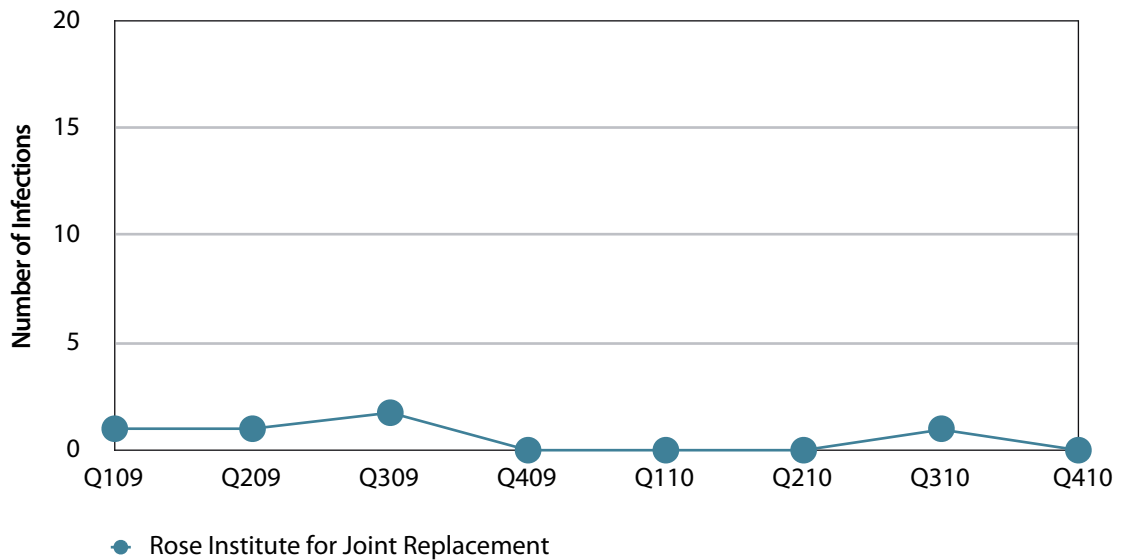
Complications



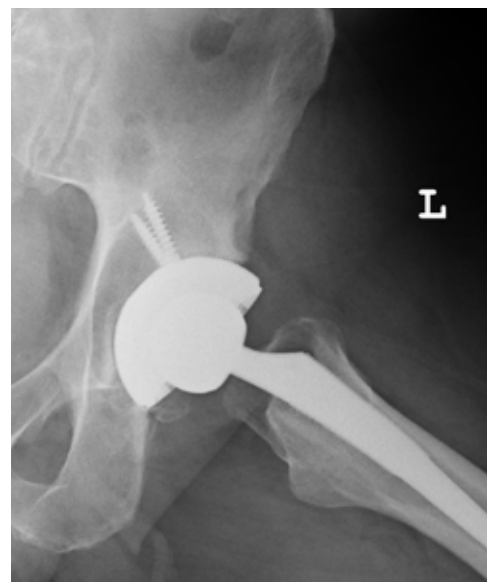
Surgical Site Infections (SSIs)

Recently CMS elevated the prevention of SSIs to a national priority status. We have put a major emphasis on surgical site infections and continually review our standards, processes and data throughout the year in order to avoid these complications. Below we share our 2009 and 2010 data for total volumes. As indicated in the below graph, we experienced a 0.1% surgical site infection rate for 2010.

Rose Institute for Joint Replacement SSIs



Hip Replacement



Surgical Care Improvement (SCIP) Measures

Outcomes for the Rose Institute for Joint Replacement are significantly better than average benchmarks. Rates reported in this section are for the total knee and hip replacements and are for the 2010 year. We are proud to be now reporting at 100% in all major categories.

The Surgical Care Improvement Project (SCIP) is a national quality partnership of 10 steering organizations (including the Joint Commission and the Centers for Medicare and Medicaid Services) dedicated to improving surgical care through the reduction of complications. It is estimated that SCIP protocols will save many lives nationally by reducing the incidence of surgical complication. It is for this reason that our Institute continually assesses and reassesses our processes to ensure that we are above the national benchmark in all categories.

Two important SCIP protocols of interest are the prevention/reduction of Venous Thromboembolism (VTE), and the prevention/reduction of Surgical Site Infections. Both have been a major focus of our quality initiatives.

Antibiotics: Critical in Preventing Surgical Infections

Prior to surgery, patients are carefully evaluated and should be chosen a prophylactic antibiotic consistent with national guidelines. Equally important is for timely administration and timely discontinuation. Studies indicate that the optimum timing for prophylactic antibiotics is within one hour prior to incision and the coverage should not be extended beyond 24 hours even if a patient has tubes or drains post operatively.

Successes include:

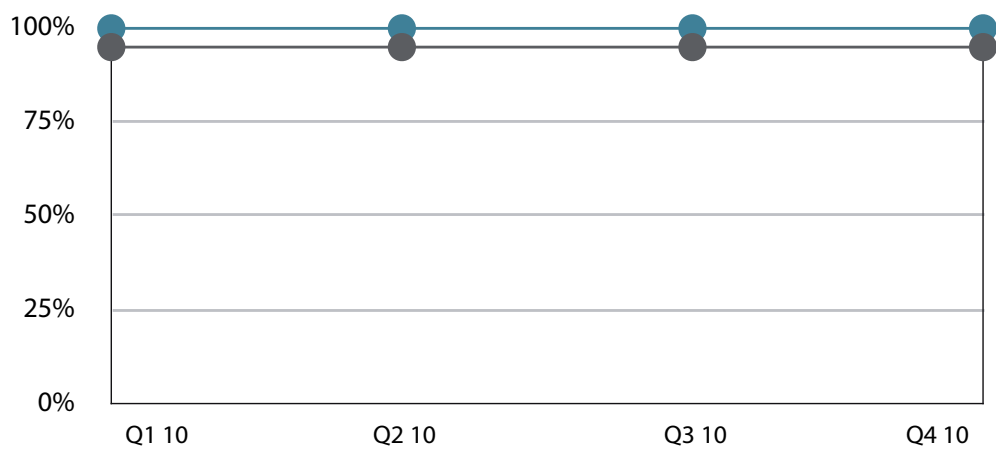
- Revised physician pre-op orders and developed a standard order set to be used for all orthopedic surgeons.
- Monthly Rose Institute for Joint Replacement operational meetings
- Global education to all clinicians providing care to at risk population
- Strict adherence to "Time Out" procedures
- Updating Operating Room preference cards
- Shared information and review at weekly "Core Measures" meetings
- Daily monitoring by a Quality Analyst
- Prophylactic antibiotics primed and hung by Pre-op Holding areas
- Changed order sets to discontinue antibiotics within 24 hrs of surgery end time
- Drill down of misses performed

Surgical Care Improvement (SCIP) Measures

VTE Prophylaxis

VTE is a collective term for Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE). At our Institute, we remain dedicated to making certain every patient receives the appropriate VTE prophylaxis in a timely manner. There are both pharmaceutical prophylaxis and mechanical prophylaxis that can be ordered. The following data represents total knee and total hip replacement procedures.

Rose Institute for Joint Replacement

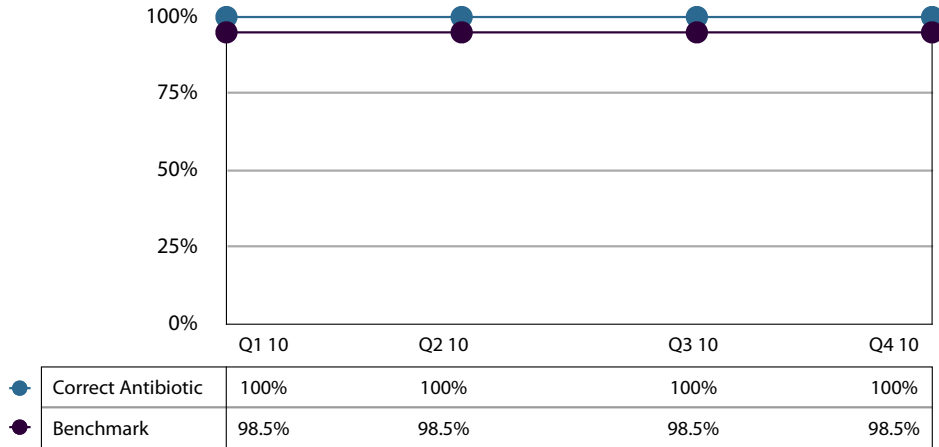


● VTE Prophylaxis	100%	100%	100%	100%
● Benchmark	98.5%	98.5%	98.5%	98.5%

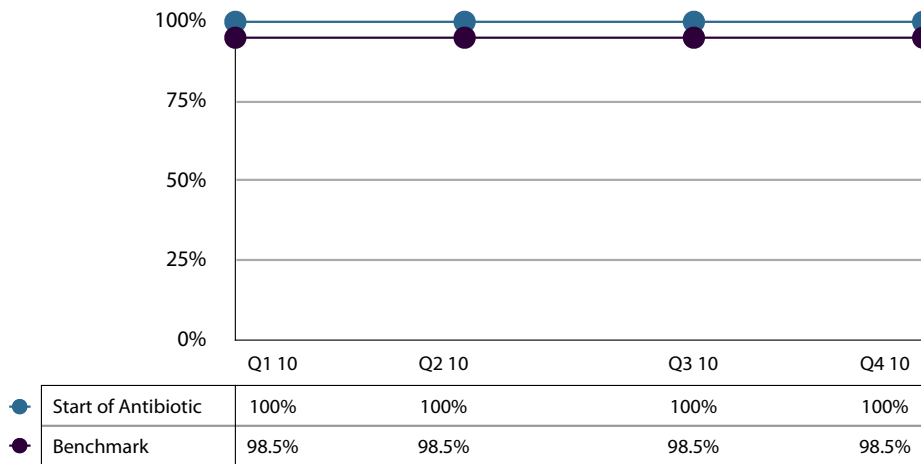
Knee Replacement



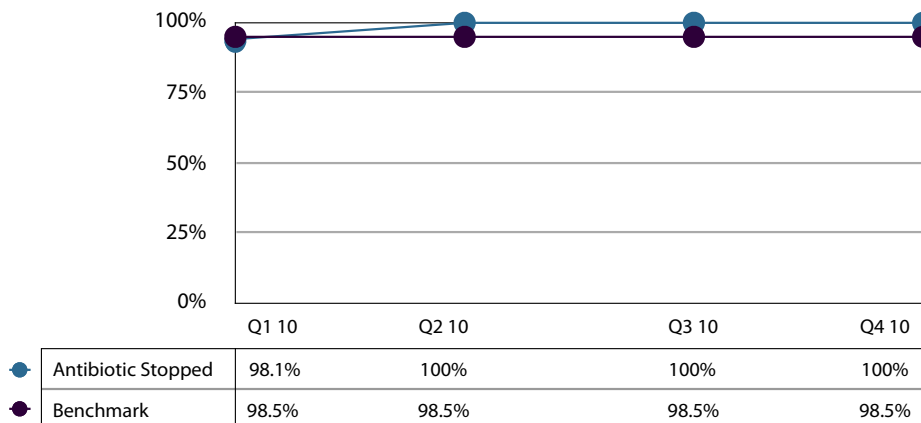
Prophylactic Antibiotic is Correct According to SCIP Guidelines



Antibiotic Start Within One Hour of Procedure



Antibiotic Stopped Within 24hrs of Surgery End Time



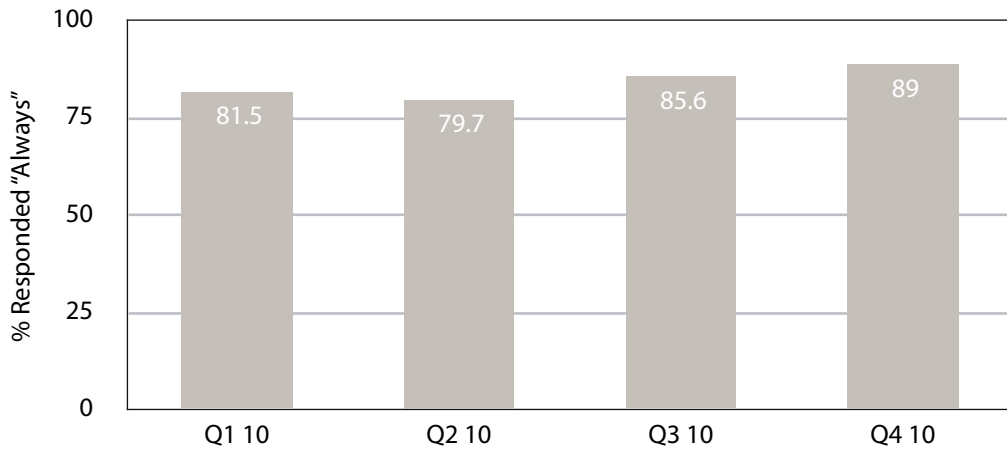
HCAHPS Patient Satisfaction

Pavilion II The Orthopedic and Spine Unit

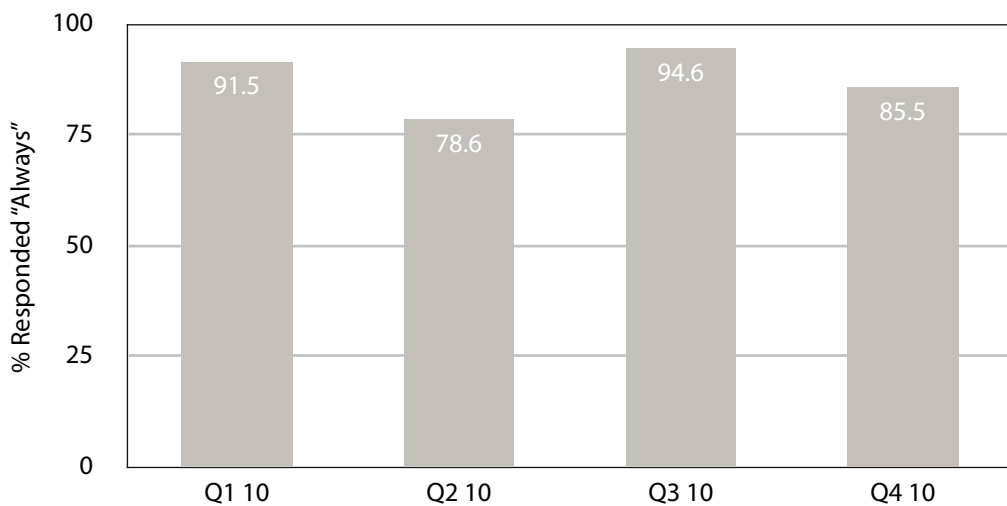
“It’s all about our patients.”

The Health Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is a national, standardized survey of patients perception of their hospital experience. The survey focuses on the aspects of the care experience that are particularly meaningful to patients. Input from our patients provide insight to how well we are meeting their needs and can draw attention to aspects of care were improvements can be made. Patients responses range from “always”, “usually”, to “sometimes/never”. The percentage of respondents to the “always” response is the main score that is indicative of quality at our Institutes.

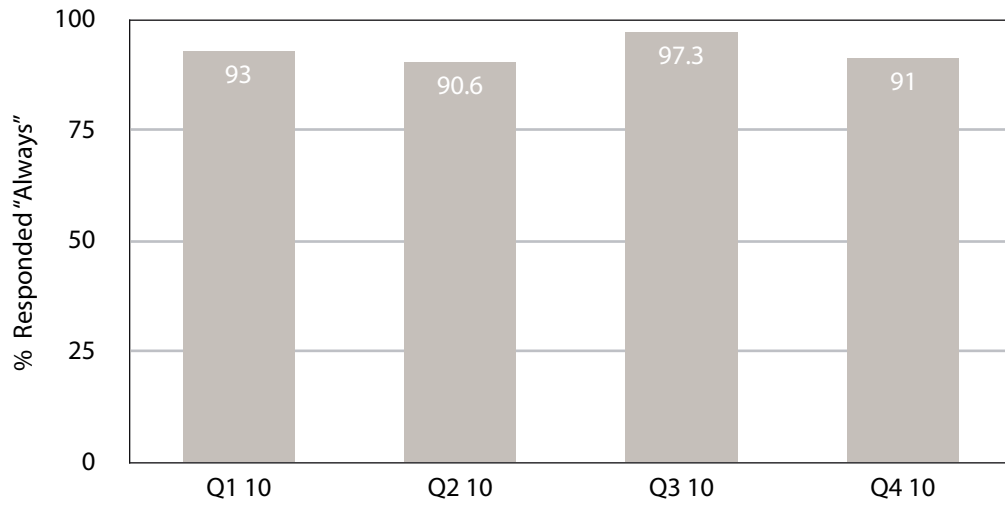
Physicians Keep the Patients Informed



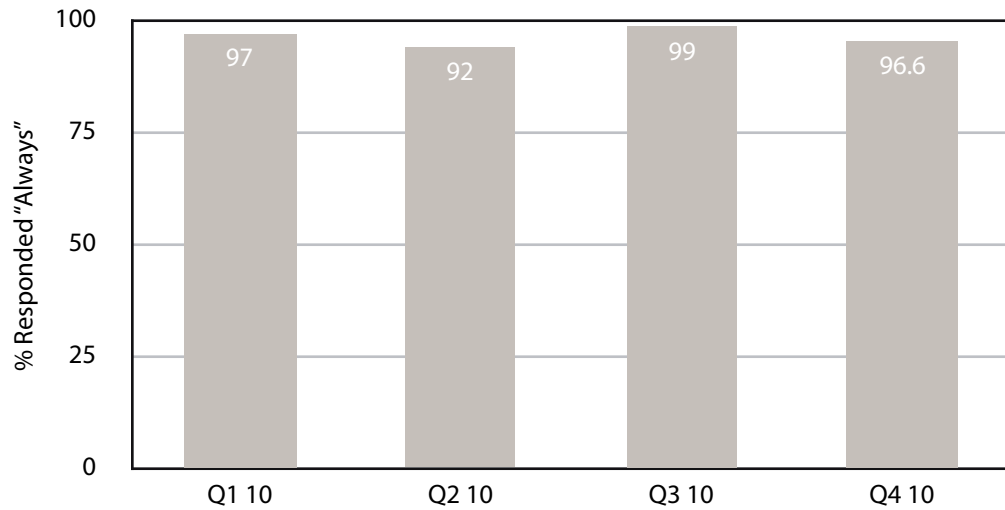
Physicians Listen Carefully



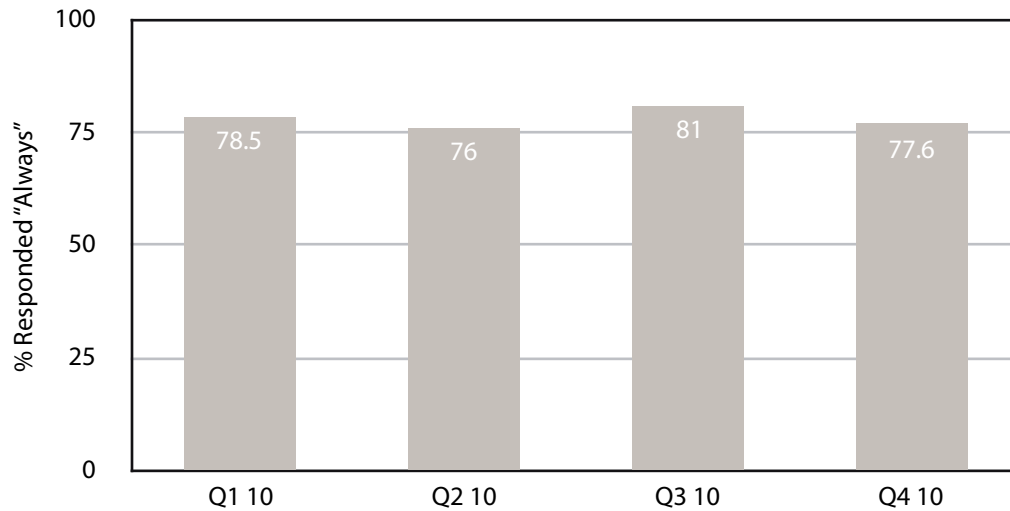
Physician Courtesy and Respect



Discharge Information Provided



Pain Management



Contact Information

Rose Spine Institute Surgeons

Gary Ghiselli, MD
DenverSpine
303.783.1300
www.denverspine.com

Jennifer Kang, MD
Neurosurgical Associates of Denver
303.333.8740
www.denverneurosurg.com

Stephen Shogan, MD
Colorado Neurosurgery Associates
303.333.8740
www.denverneurosurg.com

Sanjay Jatana, MD
DenverSpine
303.783.1300
www.jatanaspine.com
www.denverspine.com

Michael Shen, MD
Advanced Orthopedics
303.344.9090
www.advancedortho.org

Rose Institute for Joint Replacement Surgeons

Dennis Chang, MD
Advanced Orthopedics
303.344.9090
www.advancedortho.org

Eric Lindberg, MD
Orthopedic Associates
303.321.6600
www.denverortho.com

Steve Traina, MD
Western Orthopedics
303.321.1333
www.western-ortho.com

Hal Crane, MD
Orthopedic Associates
303.321.6600
www.denverortho.com

H. Andrew Motz, MD
Advanced Orthopedics
303.344.9090
www.advancedortho.org

Leslie Vidal, MD
Orthopedic Associates
303.321.6600
www.denverortho.com

Joel Gonzales, MD
Orthopedic Associates
303.321.6600
www.denverortho.com

John Papilion, MD
Advanced Orthopedics
303.344.9090
www.advancedortho.org

Armodios Hatzidakis, MD
Western Orthopedics
303.321.1333
www.western-ortho.com

Andrew Parker, MD
Orthopedic Associates
303.321.6600
www.denverortho.com

Davis Hurley, MD
Advanced Orthopedics
303.344.9090
www.advancedortho.org

David Schneider, MD
Cornerstone Orthopedics
303.665.2603
www.cornerstoneorthopedics.com



