



2012 Quality and Outcomes Report

Rose Spine Institute Rose Institute for Joint Replacement Rose Shoulder Program



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.

Rose Medical Center was honored with an "A" Hospital Safety Score by The Leapfrog Group, an independent national nonprofit run by employers and other large purchasers of health benefits. The A,B,C,D or F scores assigned to U.S. hospitals are based on preventable medical errors, injuries, accidents and infections. The Hospital Safety Score was compiled under the guidance of the nation's leading experts on patients safety and is deigned to give the public information they can use to protect themselves and their families.

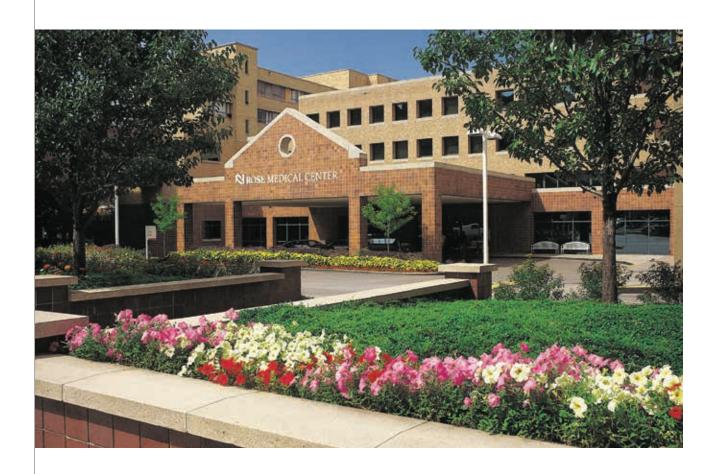
We are proud to be honored by The Joint Commission with its Gold Seal for Quality Care along with "Blue Distinction Center for Spine Surgery" and a "Blue Distinction Center for Knee and Hip Replacement" by Blue Cross/Blue Shield and to be awarded the Aetna Institute of Quality Orthopedic Care. Criteria 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.

Kenneth H. Feiler, CEO and President







Rose Medical Center

Rose 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 one of the nation's 100 Top Hospitals® by Truven Health Analytics. This is the 6th time that Rose has been recognized with this honor.

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 WorldWar 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.
- **2012** The Rose Spine Institute and Rose Institute for Joint Replacement are awarded certification from the Joint Commission for Spine and Orthopedic Care.
- **2013** Rose Medical Center is recognized as one of only six hospitals nationwide to receive the NDNQI Award for Outstanding Nursing Quality at the American Nurses Association (ANA) Nursing Quality Conference.
- **2013** Rose Medical Center is honored as one of the Country's 100 Top Hospitals.





February 2013, Rose Medical Center was named again as one of the nation's 100 Top Hospitals® by Truven Analytics, a leading provider of information and solutions.



Designated a 100 Top Hospital®

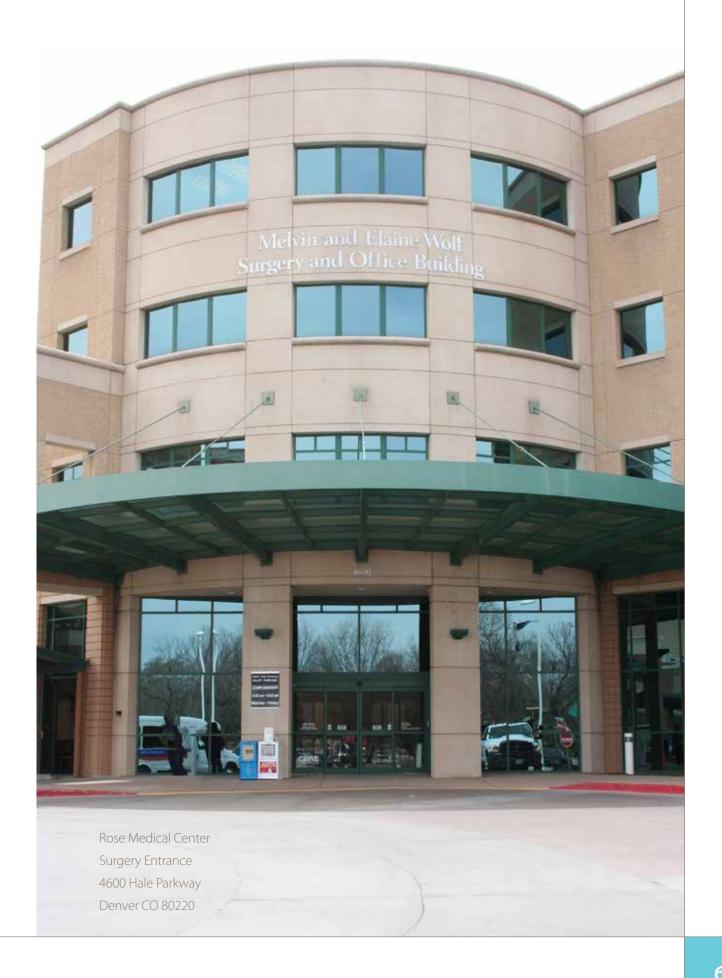
Rose Medical Center was today named one of the nation's 100 Top Hospitals® by Truven Health Analytics, formerly the healthcare business of Thomson Reuters. Truven Health Analytics is a leading provider of information and solutions to improve the cost and quality of healthcare. This is the 6th time that Rose has been recognized with this honor.

The Truven Health 100 Top Hospitals® study evaluates performance in 10 areas: mortality; medical complications; patient safety; average patient stay; expenses; profitability; patient satisfaction; adherence to clinical standards of care; post-discharge mortality; and readmission rates for acute myocardial infarction (heart attack), heart failure and pneumonia. The study has been conducted annually since 1993.

"Our vision at Rose is to provide insanely great care for our patients, and I believe this recognition is a sign that we are achieving that vision" said Kenneth Feiler, President & CEO of Rose Medical Center. "I am so proud to work with our staff, our physicians and our volunteers who show commitment, passion and willingness to do what is right for every patient every day."

To conduct the 100 Top Hospitals® study, Truven Health researchers evaluated 2,922 short-term, acute care, non-federal hospitals. They used public information — Medicare cost reports, Medicare Provider Analysis and Review (MedPAR) data, and core measures and patient satisfaction data from the Centers for Medicare and Medicaid Services (CMS) Hospital Compare website. Hospitals do not apply, and winners do not pay to market this honor.

"The winners of the 100 Top Hospitals® award have driven the national benchmarks higher every year for 20 years," said Jean Chenoweth, senior vice president at Truven Health Analytics. "This year's winners have brought even higher value to their local communities - better quality, higher efficiency and high patient perceptions of care, while confronting the challenges of massive industry-wide transformation to implement healthcare reform. The key to success in a tumultuous environment is visionary leadership that develops and maintains a hospital-wide culture of excellence that cuts across everything, from patient care to housekeeping to administration, and the refusal to rest on laurels when it comes to adopting new technologies and techniques. I congratulate this year's winners for their persistent drive for excellence.



February 2013- Rose Medical Center is recognized as one of only six hospitals nationwide to receive the NDNQI Award for Outstanding Nursing Quality[®].



Rose Medical Center is recognized as one of only six hospitals nationwide to receive the NDNQI Award for Outstanding Nursing Quality® at the American Nurses Association (ANA) Nursing Quality Conference. As an award winner, Rose participates in ANA's National Database of Nursing Quality Indicators (NDNQI) the nation's most comprehensive database of nursing performance measures.

Rose and the other honorees were identified by researchers from among more than 1,900 hospitals – about one-third of U.S. hospitals – that report results to NDNQI and measure their performance against other NDNQI hospitals regionally, statewide and nationwide. The six awardees demonstrated superior results and sustained improvement in patient outcomes that are tied to the quality of nursing services and nurse work environment factors. A total of 17 clinical process and patient outcome measures are evaluated to determine overall quality. "Exceptional nursing quality has been a hallmark of Rose Medical Center since it opened more than 60 years ago," said Lynne Wagner, Chief Nursing Officer at Rose Medical Center. "Our nursing staff takes great pride in identifying and implementing opportunities for improvement to ensure that we are providing the best care for our patients. We are honored to be one of only six hospitals in the country recognized for our outstanding nursing quality."

For these award-winning hospitals, improving the quality of nursing services that directly affect patient outcomes is ingrained in their operations. For example, Rose significantly reduced ventilator-associated pneumonia, the leading cause of death resulting from hospital-acquired infections, from 17 cases in 2008-09 to just one case in 2011-12. The staff improved team-based oral care standards and implemented a series of interventions proven to reduce infection rates.

NDNQI, a program of ANA's National Center for Nursing Quality, tracks a broad range of outcomes that indicate the quality of nursing services, such as hospital-acquired pressure ulcers, patient falls and infections. It also establishes links between patient outcomes and nurse staffing characteristics, such as nursing care hours, education level, certification and turnover. NDNQI allows nursing units to compare their performance to similar units at other hospitals and use the data to set benchmarks for excellence.

March 2012 -Rose Medical Center awarded Certification from the Joint Commission for Spine and Orthopedic Care.



Rose Medical Center has earned The Joint Commission's Gold Seal of Approval™ for its Spine Surgery and Knee and Hip Replacement Programs by demonstrating compliance with The Joint Commission's national standards for health care quality and safety in disease-specific care. The certification award recognizes Rose's dedication to continuous compliance with The Joint Commission's state-of-the-art standards.

Rose underwent a rigorous on-site survey in this month. A team of Joint Commission expert surveyors evaluated Rose for compliance with standards of care specific to the needs of patients and families, including infection prevention and control, leadership and medication management. "In achieving Joint Commission certification, Rose Medical Center has demonstrated its commitment to the highest level of care for its spine and orthopedic patients," said Jean Range, M.S., R.N., C.P.H.Q. executive director, Disease-Specific Care Certification, The Joint Commission. "Certification is a voluntary process and I commend Rose Medical Center for successfully undertaking this challenge to elevate its standard of care and instill confidence in the community it serves."

"At Rose, we strive to provide the highest quality of care to our orthopedic and spine patients. This certification by The Joint Commission validates the significant investment we have made in to ensure quality for every patient, every day," said Lynne Wagner, Chief Nursing Officer for Rose Medical Center. "Our entire orthopedic and spine teams, from our surgeons to our nurses to our rehabilitation therapists, are dedicated to the care of our patients, so it is with great pride that we accept this recognition from The Joint Commission."

The Joint Commission's Disease-Specific Care Certification Program, launched in 2002, is designed to evaluate clinical programs across the continuum of care. Certification requirements address three core areas: compliance with consensus-based national standards; effective use of evidence-based clinical practice guidelines to manage and optimize care; and an organized approach to performance measurement and improvement activities.



Gary Ghiselli, MD



Sanjay Jatana, MD *Medical Director 2009-2013*



Jennifer Kang, MD



Michael Shen, MD



Stephen Shogan, MD



David Wong, M.D.

Participating Spine Surgeons at the Rose Spine Institute

We are pleased to present the second 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.

We are proud to be honored by The Joint Commission with its Gold Seal for Quality Care, along with "Blue Distinction Center for Spine Surgery" by Blue Cross/Blue Shield and to be awarded the Aetna Institute of Quality Spine Surgery Care. Designations such as these include a comprehensive evaluation of structure, process and outcome measures developed from expert physicians and medical organizations.

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 2012 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 pateints 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.





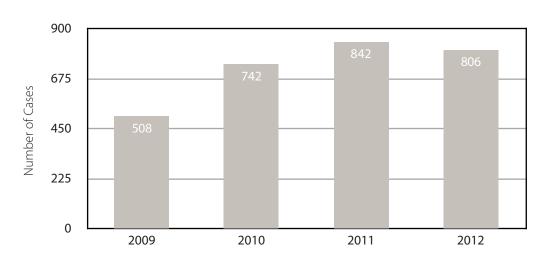
(top) **Jan Thomas**Advanced Nurse Practitioner

(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



Cervical Spine Surgery

Artificial Disc Replacement 4-Year Postoperative X-rays



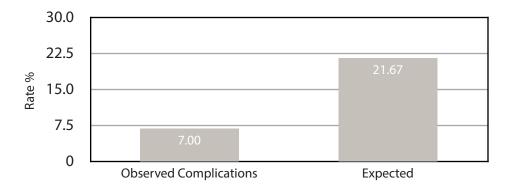
Reporting Outcomes

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.

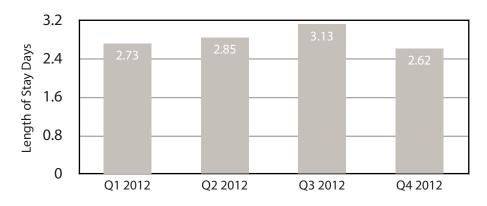




Complications



Average Length of Stay

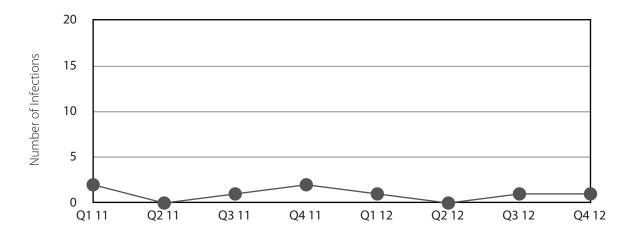


Surgical Site Infections (SSIs)

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 2012, we had an overall infection rate for all spine procedures of 0.4%. 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



Spine Surgery

Fusion Low Back



Surgical Care Improvement (SCIP) Measures

Outcomes for the Rose Spine Institute are significantly better than average benchmarks. Rates are reported below for the 2012 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:

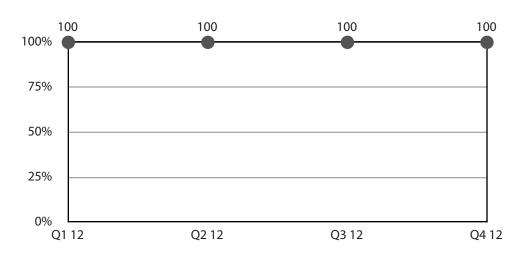
- Revised physician pre-op orders and a developed standard order set to be used for all spine surgeons.
- Monthly Rose Spine Institute operational meetings with our multi-disciplinary team
- Global education to all providers delivering care to at risk population
- Strict adherence to "Time Out" procedures
- Shared information and review at weekly "Core Measures" meetings
- Daily monitoring by a Quality Analyst
- Prophylactic antibiotics are given in a timely fashion
- Changed order sets to discontinue antibiotics within 24 hrs of surgery end time
- Ongoing analysis 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

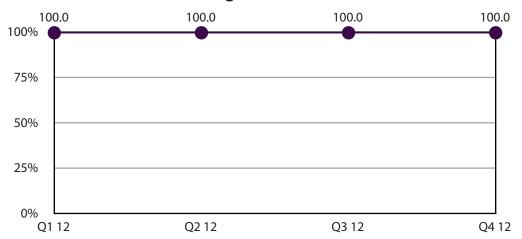


Spondylolisthesis L5-S1 Surgery

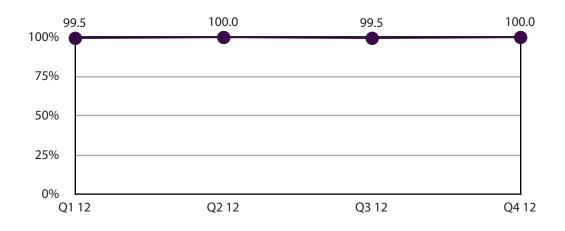




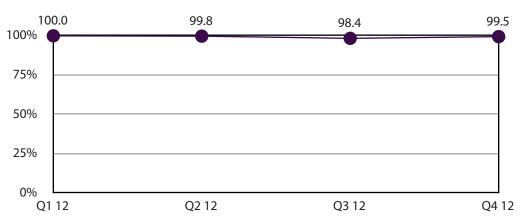
Prophylactic Antibiotic is Correct According to SCIP Guidelines



Antibiotic Start Within One Hour of Procedure



Antibiotic Stopped Within 24hrs of Surgery End Time





Dennis Chang, MD *Medical Director*



Joel Gonzales, MD



Davis Hurley, MD



Derek Johnson, MD



Brian Larkin, 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



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.

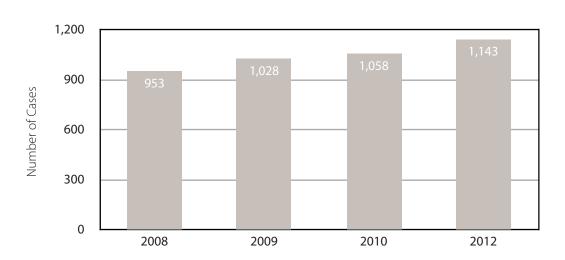
We are proud to be honored by The Joint Commission with its Gold Seal for Quality Care, along with "Blue Distinction Center for Knee and Hip Replacement" by Blue Cross/Blue Shield and to be awarded the Aetna Institute of Quality Orthopedic Care. Designations such as these include a comprehensive evaluation 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.

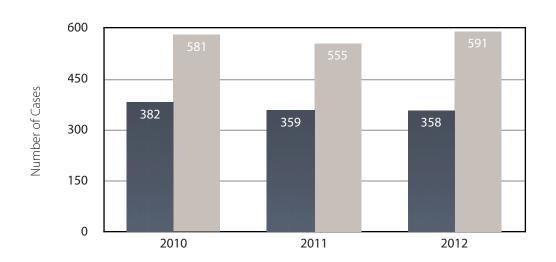
Volume Equals Quality

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



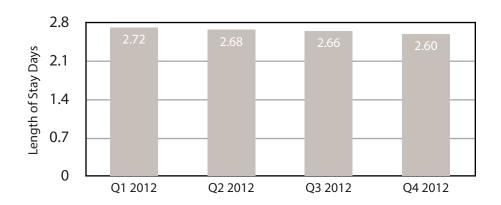
Knee and Hip Replacement Volume



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 2012 year.

Average Length of Stay



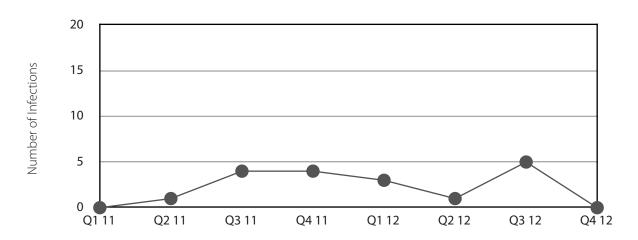
Mortality



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 2011 and 2012 data for total volumes.

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 2012 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 reassess 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:

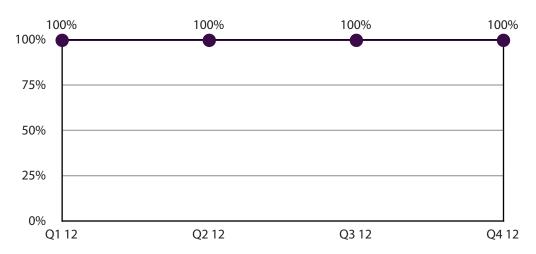
- Revised physician pre-op orders and developed a standard order set to be used for all orthopedic surgeons.
- Monthly Rose Institute for Joint Replacement operational meetings
- Global education to all clinicians providing care to at risk population
- Strict adherence to "Time Out" procedures
- Updating 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

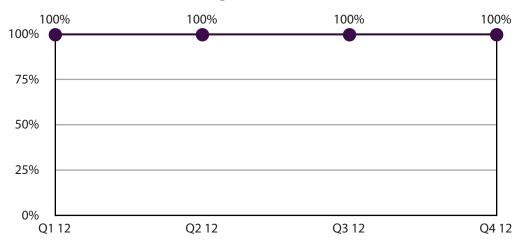


Knee Replacement

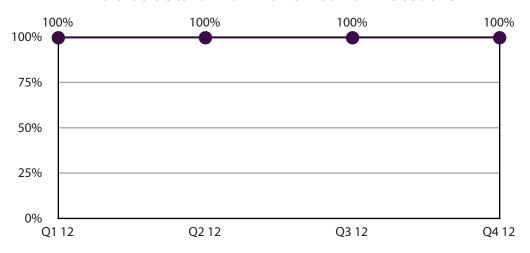




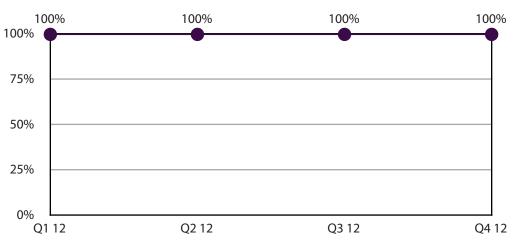
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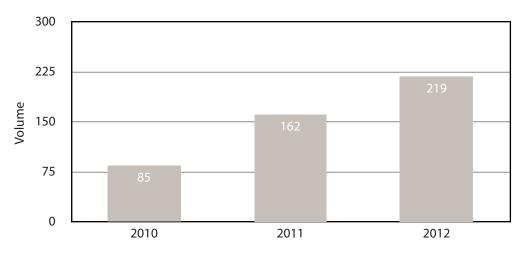
Leslie Vidal, MD

Our Shoulder Surgeons share a commitment to quality outcomes and compassionate care for our patients.

Since shoulder surgery is typically less popular than knee and hip replacements it is important to find a program that offers a focused approach to shoulder care. The shoulder program at Rose Medical Center offers a comprehensive approach to shoulder care, whether it is with shoulder replacements, rotator cuff repair, labral repair or distal clavicle excision. Our group is made of physicians who are specialized in the field of shoulder surgery. We treat the "weekend warriors" as well as people with disorders related to aging, accidents or overuse.

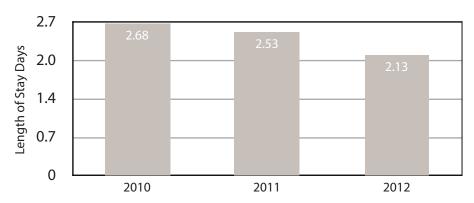
Our shoulder surgeons are well known experts in the field of surgical evaluation and the diagnosis and treatment of shoulder injuries and conditions.

Shoulder Surgeries Performed



2012 Shoulder Cases by Principal Procedure Code	
Arthroplasty, Total Shoulder Replacement	107
Arthroplasty, Partial Shoulder Replacement	15
Arthroplasty, Repair of Recurrent Dislocation of Shoulder	2
Arthroplasty, Other Repair of Shoulder	21
Reverse Total Shoulder Replacement	58
Revision of Joint Replacement of Upper Extremity	16
Total Cases	219

Average Length of Stay



Contact Information

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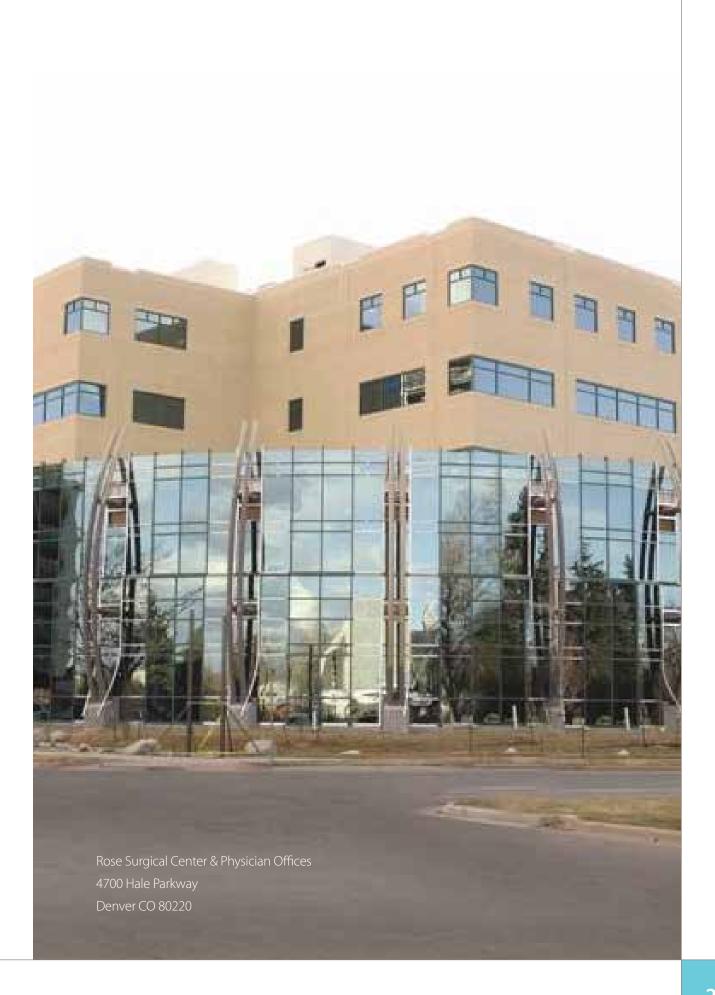
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