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<tr>
<td>INTRODUCTION</td>
</tr>
<tr>
<td>SURGICAL VOLUME</td>
</tr>
<tr>
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PRESENTING THE 2015 ANNUAL OUTCOMES REPORT

In Hoag Orthopedic Institute’s fourth year of operation, the HOI family sustained orthopedic excellence at the national level and forged industry-leading advances. Progress experienced by HOI this past year was indicative of what’s possible for like-minded organizations, especially in these rapidly evolving health care times.

It was another eventful year for health care in 2014. At best, there were innumerable global healing innovations in medical technology and procedural methodologies. At worst were the Ebola scare and other disease outbreaks. As a nation and as providers, we’ve grappled with rising health care costs, access to care, an aging population and Affordable Care Act (ACA) implementation.

In the ensuing pages you will discover how HOI is meeting these challenges, from protecting patients against infectious disease to providing the area’s underserved with greater access to musculoskeletal care. Our orthopedic specialty hospital and ambulatory care centers have leveraged technology, innovations and performance data to deliver care with maximum value for patients and payers alike. In the process, HOI became the highest volume provider of hip and knee joint replacements in California for the third consecutive year.

Even more telling than this vast volume of expertise are HOI’s quality care metrics demonstrating superior outcomes. Again in fiscal year 2014, measurement added to our momentum. With regular feedback on how well they are doing and any opportunities for improvement, HOI physicians and clinical team members have risen to the challenges. HOI patient feedback is generating ever better healthcare experiences. People seeking relief from musculoskeletal conditions are using HOI data to make better-informed choices.

As a leading and trusted provider of value-based orthopedic care, we believe that HOI’s performance should be shared. It is our pleasure to present the data and several examples of the best practices that have defined our organization this year. We hope our success story will inspire yours.

Sincerely,

Robert S. Gorab, MD  Dereesa Purtell Reid, MBA
Chief Medical Officer  Chief Executive Officer

 OUR VISION
WE WILL BE THE TRUSTED LEADER IN ORTHOPEDIC CARE AND MEDICINE, RECOGNIZED NATIONALLY FOR OUR SUPERIOR CLINICAL OUTCOMES, INNOVATION AND PATIENT VALUE.
In 2010, when California’s most respected orthopedic surgeons partnered with Hoag Memorial Hospital Presbyterian, Orange County’s leading health system, Hoag Orthopedic Institute hospital (HOI) was born. Today, with its hospital in Irvine and ambulatory surgery centers in Newport Beach and Orange, HOI has emerged as one of the highest quality, value-driven centers of orthopedic excellence in the United States.

HOI’s hospital medical staff consists of 311 specialty physicians, including 81 orthopedic surgeons. Each one meets rigorous quality practice standards at HOI to provide care exclusively for patients requiring inpatient and outpatient surgery related to:

- Arthritis
- Ankle & Foot
- Fracture Care
- Hand & Wrist
- Knee & Hip
- Pain Management
- Shoulder & Elbow
- Spinal Disorders
- Sports Medicine
- Shoulder & Elbow
- Spinal Disorders
- Sports Medicine

HOI hospital resides in an award-winning facility on the 16250 Sand Canyon Avenue campus between the 5 and 405 freeways in Irvine, California. HOI’s community hospital features 70 beds and nine operating rooms designed and equipped specifically for orthopedic surgical procedures. The facility was fully modernized prior to its opening and today fosters a patient-centered environment for optimal healing.

HOI has ranked as the highest volume orthopedic provider in California for the past three years by providing the most advanced orthopedic solutions through HOI hospital and HOI’s two freestanding surgery centers, Main Street Specialty Surgery Center (MSSSC) in Orange and Orthopedic Surgery Center of Orange County (OS Coc) in Newport Beach.

Data presented in this publication reflects statistics for patients treated at all three facilities.
OUR MISSION

TO RESTORE, IMPROVE AND ENHANCE THE HEALTH AND MOBILITY OF INDIVIDUALS WITH MUSCULOSKELETAL CONDITIONS AND DISEASES THROUGH EXCELLENCE IN CARE AND OUTCOMES, CLINICAL INNOVATION, RESEARCH AND ADVOCACY.

HOI ENTERPRISE-WIDE ORTHOPEDIC CASE VOLUME

FY14 – Hoag Orthopedic Institute
Total Surgical Case Volume

2,319
Main Street Specialty Surgery Center

5,146
Orthopedic Surgery Center of Orange County

4,571
Hoag Orthopedic Institute Hospital

Source: Hoag Finance, Total FY14 volume

FY13 – Hoag Orthopedic Institute
Total Surgical Case Volume

2,759
Main Street Specialty Surgery Center

4,677
Orthopedic Surgery Center of Orange County

3,981
Hoag Orthopedic Institute Hospital

Source: Hoag Finance, Total FY13 volume

FY12 – Hoag Orthopedic Institute
Total Surgical Case Volume

2,392
Main Street Specialty Surgery Center

4,576
Orthopedic Surgery Center of Orange County

3,786
Hoag Orthopedic Institute Hospital

Source: Hoag Finance, Total FY12 volume

FY11 – Hoag Orthopedic Institute
Total Surgical Case Volume

2,420
Main Street Specialty Surgery Center

3,461
Orthopedic Surgery Center of Orange County

3,813
Hoag Orthopedic Institute Hospital

Source: Hoag Finance, Total FY11 volume

A case may include multiple procedures.
Facilities with high volumes of procedures offer patients a well-documented safety advantage. HOI had the largest volume of joint replacement patients in California for three consecutive years, and its volumes continue to grow. In the past year, HOI has experienced an 11 percent increase in its volume of cases.

HOI Hospital Fiscal Year 2014
Total Procedural Volume

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<td>Cervical Fusion</td>
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Source: Hoag Finance, FY14
FOR THE THIRD YEAR RUNNING, HOI HAD THE HIGHEST VOLUME OF HIP AND KNEE REPLACEMENTS IN THE STATE OF CALIFORNIA.
OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT (OSHPD)

Hoag Orthopedic Institute Hospital Procedural Volume Overview  continued

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<td>109 / 28</td>
<td>279 / 166</td>
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<td>54%</td>
<td>115.7</td>
<td>50%</td>
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Source: Hoag Finance, FY14
Patient experience. Patient satisfaction. Patient engagement. Patient- and family-centered care. While virtually every hospital in the United States uses these industry catchphrases, select institutions, such as HOI, consider these terms foundational. We have always understood that our patients determine our success. We do not stop at clinical success; each unique patient’s expectations must be met or exceeded for him or her to perceive that we have been successful providers of his or her care.

A standardized survey tool called the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) is used to gauge patients’ perceptions of their care. Because hospitals across the country are asking patients the same questions and using the same response options, the scores are valid to use for facility comparisons.

HCAHPS scores are reported to CMS (the Centers for Medicare and Medicaid Services) and are provided to the public via the CMS website, Medicare.gov, located online at www.medicare.gov/hospitalcompare/search.html. On this site, the general public has the ability to compare hospitals’ scores for HCAHPS as well as their performance in clinical measures. Up to three hospitals (in close proximity) at a time may be selected. With the side-by-side comparison afforded by this site, it is simple for a prospective patient, family or payer to identify how hospitals are performing in many key areas.

**MEETING PATIENT EXPECTATIONS AT HOI**

Meeting or exceeding the expectations and needs of each patient begins with pre-op educational classes that help reduce anxiety and pave the way for a successful outcome. Many of our patients remain active in the workforce, so we conduct classes at various times and on different days of the week throughout each month to ensure that patients and their family members will have an opportunity to attend.

HOI nurse navigators help guide each patient through the experience. A nurse navigator contacts the patient before his or her HOI admission, and is available to answer any questions that may arise. Oftentimes, the nurse navigator will visit with the patient once he or she is admitted and personally make the post-discharge follow-up phone call to the patient.

HOI has a pre-admission screening team that works on the patient’s behalf to insure that all paperwork is complete, coordinate pre-op tests, and resolve any issues with payers and insurance. These staff members also serve as a resource to answer questions that patients or their family members may have.

Again this year, HOI’s staff members’ mutual accountability led to exemplary customer service. As a multidisciplinary team, they continually strive to provide superior-quality services for orthopedic patients in a comfortable and professional healing environment.
“A MULTIDISCIPLINARY FOCUS ON PATIENTS’ WELL-BEING IS MANIFESTED THROUGH COLLABORATION, COORDINATION, COMMUNICATION AND CLINICAL EXPERTISE. IT LEADS TO THE BEST CLINICAL OUTCOMES, AND GENERATES THE HIGHEST DEGREE OF PATIENT AND FAMILY CONFIDENCE AND SATISFACTION.”

KANOE ALLEN, MSN-CNS, RN, PHN, ONC
VICE PRESIDENT AND CHIEF NURSING OFFICER

HOI’S HCAHPS SURVEY RESULTS

Patient Perception of Care – Top Box Responses (Percent - Higher is Better)

Communication – Top Box Responses (Percent - Higher is Better)

Source: National and State of California calendar year 2013 data, retrieved 12/10/14; and Hoag Orthopedic Institute - Press Ganey 10/2013 to 9/2014
PATIENT EXPERIENCE CONTINUED

The following charts display 2014 perceptions of functional outcomes and pain following hip and knee replacement surgeries.

**HOOS = Hip Osteoarthritis Outcome Score**
With HOOS, we evaluate short-term and long-term symptoms and function in patient with hip injury and osteoarthritis.

**HOOS Category Scores (Higher is Better)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-Op</th>
<th>2-6 Weeks</th>
<th>2-3 Months</th>
<th>6-9 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities of Daily Living</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sport/Rec</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Activity Hip Results Scores (Higher is Better)**

<table>
<thead>
<tr>
<th>Score</th>
<th>Pre-Op</th>
<th>2-6 Weeks</th>
<th>2-3 Months</th>
<th>6-9 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: HOI patient reported outcomes, October 2013 - September 2014

“I’M PAIN-FREE. MY NEW HIP HAS MADE EVERYTHING I DO IN LIFE MORE COMFORTABLE AND ENJOYABLE.”

LAWRENCE TAYLOR, HONOLULU, HAWAII, RESIDENT
TOTAL HIP REPLACEMENT PATIENT, JULY 2013
(SEE PAGE 48 FOR LARRY’S FULL STORY)
KOOS = Knee Osteoarthritis Outcome Score

With KOOS, we evaluate short-term and long-term symptoms and function in patients with knee injury and osteoarthritis.

KOOS Category Scores (Higher is Better)

![KOOS Category Scores Graph]

Source: HOI patient reported outcomes, October 2013 - September 2014

Activity Knee Results Scores (Higher is Better)

![Activity Knee Results Scores Graph]

Source: HOI patient reported outcomes, October 2013 - September 2014
“I AM SO GRATEFUL FOR ALL THE HELP FROM HOAG ORTHOPEDIC INSTITUTE. THEY GAVE ME MY LIFE BACK.”

RODOLFO FRANCO, SANTA ANA, CALIFORNIA, RESIDENT
KNEE ARTHROSCOPY, JUNE 2014
(SEE PAGE 49 FOR ROLDOLFO’S FULL STORY)

PATIENT EXPERIENCE CONTINUED

VAS = Visual Analog Scale on Pain Intensity
The VAS is a tool widely used to measure pain intensity (from no pain to extreme pain). Each participating post-op patient is asked to indicate perceived pain.

**VAS Results – HOI MD (AGG) Hip** *(Lower is Better)*

<table>
<thead>
<tr>
<th>6 More Pain</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0 Less Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Op</td>
<td>2-6 Weeks</td>
<td>2-3 Months</td>
<td>6-9 Months</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: HOI patient reported outcomes, October 2013 - September 2014

**VAS Results – HOI MD (AGG) Knee** *(Lower is Better)*

<table>
<thead>
<tr>
<th>6 More Pain</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0 Less Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Op</td>
<td>2-6 Weeks</td>
<td>2-3 Months</td>
<td>6-9 Months</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: HOI patient reported outcomes, October 2013 - September 2014
SF-36 = Patient-reported Wellness Status

The SF-36 is a 36-question, patient-reported surveying proven useful in surveys of general and specific populations, comparing the relative burden of diseases, and in differentiating the health benefits produced by a wide range of different treatments.

**SF-36 Sub-Category Hip Scores (Higher is Better)**

<table>
<thead>
<tr>
<th></th>
<th>Pre-Operative</th>
<th>Post-Operative</th>
<th>2-3 Months</th>
<th>6-9 Months</th>
<th>12-15 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Function</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>Role Physical</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Role Emotional</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Pain</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: HOI patient reported outcomes, October 2013 - September 2014

**SF-36 Sub-Category Knee Scores (Higher is Better)**

<table>
<thead>
<tr>
<th></th>
<th>Pre-Operative</th>
<th>Post-Operative</th>
<th>2-3 Months</th>
<th>6-9 Months</th>
<th>12-15 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Function</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
</tr>
<tr>
<td>Role Physical</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Role Emotional</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Pain</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: HOI patient reported outcomes, October 2013 - September 2014

“MY HIP REPLACEMENTS WERE THE BEST EXPERIENCE I’VE EVER HAD IN MEDICINE.”

LORI SAVIT, LAGUNA BEACH, CALIFORNIA, RESIDENT MINI POSTERIOR APPROACH HIP REPLACEMENT PATIENT, NOVEMBER 2011

(SEE PAGE 46 FOR LORI’S FULL STORY)
CLINICAL OUTCOMES AND INFECTION PREVENTION

A national movement toward more accountable care has led to the standardization of key performance measures. In our ever-evolving health care delivery system, providers are held accountable for the cost and quality outcomes of the services provided. Incentives are structured to reward best practices and discourage complications.

An early adopter of health care reform, HOI has tracked outcomes since opening its doors in November 2010. This publication reports the data tracked and compares it to state and national benchmarks. HOI has invested in a rigorous outcome tracking and reporting system to sustain quality achievements, foster excellence in care, and identify opportunities for improvement that will ultimately improve population health.

READMISSION RATES

CMS considers unplanned, 30-day hospital readmission an avoidable event for total hip/total knee replacement (arthroplasty) procedures. Through Medicare, CMS assesses readmission payment penalties based on Medicare patient readmission rates. These readmission rates are benchmarked against the national average. In December 2013, CMS added public reporting of hospitals’ risk-adjusted readmission rate for total hip arthroplasty (THA) and total knee arthroplasty (TKA).

This data reflects the readmission rate for Medicare patients as well as all other patients hospitalized at HOI for hip and knee replacement and arthroplasty procedures.

THA/TKA 30-Day Readmission Rates (Percent - Lower is Better)

30-Day THA/TKA Readmission Rates (Percent - Lower is Better)

Source: Health Services Advisory Group for Q1 2013 through Q4 2013

This data reflects the readmission rate for Medicare patients as well as all other patients hospitalized at HOI for hip and knee replacement and arthroplasty procedures.

THA/TKA 30-Day Readmission Rates (Percent - Lower is Better)

30-Day THA/TKA Readmission Rates (Percent - Lower is Better)

Source: Health Services Advisory Group
The national 30-day rate of all-cause readmissions after hospital discharge is 16 percent, according to data from Hospital Compare (www.medicare.gov/hospitalcompare). A December 15, 2014, *Becker’s Healthcare* article states there are 45 hospitals with 30-day hospital-wide readmission rates at or below the national average. Based on their analysis, HOI’s readmission rate was the second lowest readmission rate in the nation.

**All-Cause 30-Day Readmission Rate (Percent - Lower is Better)**

<table>
<thead>
<tr>
<th>Year</th>
<th>National</th>
<th>California</th>
<th>Orange County</th>
<th>HOI CY 2010</th>
<th>HOI CY 2011</th>
<th>HOI CY 2012</th>
<th>HOI CY 2013</th>
<th>HOI CY 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2014</td>
<td>16.0%</td>
<td>18.2%</td>
<td>17.2%</td>
<td>7.6%</td>
<td>4.4%</td>
<td>3.7%</td>
<td>3.0%</td>
<td>2.9%</td>
</tr>
</tbody>
</table>


**30-Day All-Cause Readmission Rates (Percent - Lower is Better)**

Source: Health Services Advisory Group
“SCIP MEASURES HAVE BECOME AN IMPORTANT ASPECT OF HOI’S MULTIFACETED PATIENT SAFETY CULTURE. HAVING A SKILLED SURGICAL TEAM THAT EMBRACES SCIP MEASURES AND OPERATES IN A SAFE, CLEAN ENVIRONMENT HAS LED TO THE SUPERIOR OUTCOMES THAT OUR ORTHOPEDIC PATIENTS ENJOY.”

LEIGHTON SMITH, MD, CO-MEDICAL DIRECTOR, ANESTHESIOLOGY

**CLINICAL OUTCOMES AND INFECTION PREVENTION CONTINUED**

**SURGICAL CARE IMPROVEMENT PROJECT (SCIP)**

The Surgical Care Improvement Project is a national quality partnership of organizations interested in improving care. The following SCIP measures focus on reducing the incidence of complications that can occur following surgery by adhering to best practices.

Studies have demonstrated that the risk of infection increases progressively with greater time intervals between antibiotic administration and skin incision.

**Antibiotics within One Hour before Incision (Percent - Higher is Better)**

[Graph showing antibiotic use over years with percentages: 2011: 99%, 2012: 100%, 2013: 100%, 2014: 100%]


This measure of optimal care uses the “all-or-none” methodology to determine if a patient received all of the recommended treatment for which he or she was eligible. It helps ensure the right care, for every person, every time.

**SCIP All Measures All-or-None Bundle (Percent - Higher is Better)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>94.6%</td>
<td>97.0%</td>
<td>98.8%</td>
<td>99.8%</td>
</tr>
</tbody>
</table>

Source: Hoag internal data, FY 2014

This measure focuses on the use of prophylactic antibiotics (those intended to prevent infection) consistent with current guidelines on proper agents.

**Antibiotic Selection (Percent - Higher is Better)**

[Graph showing antibiotic selection with percentages: 2011: 99%, 2012: 99%, 2013: 100%, 2014: 100%]


- Average for all reporting hospitals in the United States
- Average for all reporting hospitals in California
- Hoag Orthopedic Institute on www.medicare.gov/hospitalcompare
- Hoag Orthopedic Institute internal data
“NATIONWIDE, SURGICAL SITE INFECTIONS ACCOUNT FOR 38 PERCENT OF ALL HOSPITAL-ACQUIRED INFECTIONS. **HOI PROTECTS PATIENTS** BY FULLY ADHERING TO AND REPORTING ON ALL OF SCIP’S EVIDENCE-BASED BEST PRACTICES.”

KLANE HALES, MD, CO-MEDICAL DIRECTOR, ANESTHESIOLOGY

Unnecessary, prolonged use of antibiotics can contribute to the spread of drug resistant infections that are difficult to treat. 

**Antibiotics Discontinued within 24 Hours**

(Percent - Higher is Better)

<table>
<thead>
<tr>
<th>100</th>
<th>98%</th>
<th>98%</th>
<th>99%</th>
<th>99.8%</th>
</tr>
</thead>
</table>

Hoag internal data, FY 2014

Evidence has shown that prophylaxis (preventive measures) is the most effective strategy to prevent postoperative VTE, which includes deep vein thrombosis/pulmonary embolisms (potentially fatal blood clots). For maximum effectiveness, VTE prophylaxis needs to be started at the right time with the right modality.

**Venous Thromboembolism (VTE)**

**Prophylaxis Timing** (Percent - Higher is Better)

<table>
<thead>
<tr>
<th>100</th>
<th>98%</th>
<th>98%</th>
<th>99%</th>
<th>100%</th>
</tr>
</thead>
</table>

Hoag internal data, FY 2014

Abrupt discontinuation of beta blockers (heart medication) during the perioperative (around the time of surgery) period in patients who are on chronic beta blocker therapy prior to surgery leads to increased morbidity.

**Beta Blocker Administration**

(Percent - Higher is Better)

<table>
<thead>
<tr>
<th>100</th>
<th>98%</th>
<th>97%</th>
<th>99%</th>
<th>100%</th>
</tr>
</thead>
</table>

Hoag internal data, FY 2014

| ■ Average for all reporting hospitals in the United States | ■ Average for all reporting hospitals in California | ■ Hoag Orthopedic Institute on [www.medicare.gov/hospitalcompare](http://www.medicare.gov/hospitalcompare) | ■ Hoag Orthopedic Institute internal data |
INFLUENZA IMMUNIZATIONS

According to the Centers for Disease Control (CDC), influenza causes between 3,000 and 49,000 deaths and more than 200,000 hospitalizations annually in the United States. Immunization is the single best way to protect against influenza. Health experts recommend that everyone 6 months of age and older be vaccinated against influenza every year.

To help protect our patients during flu season, October 1 to March 31, we encourage our patients to receive a flu shot before they are admitted. We emphasize this recommendation during our pre-op education classes. HOI screens every inpatient during flu season to ensure that they have received the vaccination, and offers the vaccine to hospitalized patients who have not received it.

PNEUMONIA VACCINATIONS

Another serious illness we immunize patients against is pneumonia. Nearly one million people are hospitalized with pneumonia and about 50,000 people die from this disease every year in the U.S. An easily administered, low-risk vaccine can significantly reduce a patient’s chance of infection.

The CDC recommends pneumococcal vaccines for all patients over 65 years of age and those with risk criteria. All inpatients at HOI are screened for the pneumococcal vaccine. Unvaccinated patients who meet risk criteria are offered the vaccine before being discharged from the hospital.
STANDARDIZED INFECTION RATIO (SIR)

Foremost among the vital functions infection preventionists perform are the detection and reporting of healthcare-associated infections (HAI). To identify potential problem areas, HOI monitors progress of prevention efforts. To eliminate HAI, HOI collects and reports HAI data through the CDC National Healthcare Safety Network (NHSN).

In keeping with industry standards, HOI has moved away from using non-risk adjusted raw numbers of infections and simple non-risk adjusted rates in favor of risk-adjusted measures. The Standardized Infection Ratio (SIR) provides a risk-adjusted measure that allows us to compare ourselves nationally. SIR is not to be used to compare one hospital directly to another since the data is based on the individual hospital’s patient mix; therefore, this type of comparison is not statistically valid.

The SIR is a national benchmark. More than 12,000 medical facilities upload a large amount of HAI data to the NHSN database. NHSN then performs advanced statistical analysis for risk adjustment. SIR is used to compare a hospital’s risk-adjusted infection data to national (NHSN) data. It is also used to monitor a facility’s own infection prevention progress over time.

FROM FY 2012 TO FY 2014, HOI ACHIEVED 100 PERCENT COMPLIANCE ON PREVENTION OF CATHETER-ASSOCIATED URINARY TRACT INFECTION (CAUTI), WITH ZERO CAUTI CASES.

The SIR shows the number of infections observed over the number of infections expected based on a facility’s patient mix. The lower the SIR the better. A SIR greater than 1.0 indicates that more HAI were observed than expected. A SIR less than 1.0 indicates that fewer HAI were observed than expected. A SIR equal to 1.0 indicates the same number of HAI was observed as expected.

Overall Standardized Infection Ratio (SIR) for HOI Fiscal Year 2014 (Lower is Better)

<table>
<thead>
<tr>
<th>SIR</th>
<th>Expected</th>
<th>Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>1</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Source: CDC National Healthcare Safety Network database

Using the SIR is the most accurate way to monitor HAI and allows for rapid evaluation of trends and effectiveness of interventions.
IN FISCAL YEAR 2014, **HOI HAD ZERO SURGICAL SITE INFECTIONS FOR LAMINECTOMY PROCEDURES.**

**CLINICAL OUTCOMES AND INFECTION PREVENTION CONTINUED**

**HOI SIR by Procedure**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>FY 12</th>
<th>FY 13</th>
<th>FY 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total NHSN Surgeries</td>
<td>2%</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Hip</td>
<td>0.5%</td>
<td>1%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Knee</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Spinal Fusion</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Laminectomy</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: HOI Executive Dashboard

**XENEX UV DISINFECTION**

Hoag Orthopedic Institute’s proactive investment in 2013 of the formidable germ-zapping technology known as Xenex – at HOI aptly named Xena – has given the hospital the upper hand in battling superbugs. HOI was the first hospital in Orange County to acquire the three-foot-tall robot on wheels. Xena uses pulsed xenon ultraviolet (UV) light 25,000 times more powerful than sunlight to destroy harmful bacteria, viruses, fungi and bacterial spores. It is deployed throughout the facility to further minimize patients’ risk of infection.

**SAFELY PROCESSING REUSABLE SURGICAL INSTRUMENTS**

New knowledge and technology have advanced the sterilization of contaminated medical devices, an essential aspect of infection prevention provided by unsung heroes at HOI. The Sterile Processing Department uses a computerized instrument tracking system, Sterile Processing Management (SPM®), which validates safe and effective sterilization.

Using the SPM professional practice, all trays used by HOI are coded with barcode labels. These labels enable the scanned tracking of each instrument through every phase of the sterilization and surgical processes to ensure patient safety.
HOI HAND HYGIENE PROGRAM

Hand hygiene is the best prevention against healthcare-associated infections and the spread of multi-drug resistant organisms. Mindful of the direct correlation between hand hygiene compliance and infection rates, HOI set a goal of greater than 90 percent compliance, with a stretch goal of 100 percent, and enacted multiple initiatives to increase hand hygiene compliance:

- Multidisciplinary Performance Improvement teams were designated, trained and deployed to round as secret shoppers for hand hygiene audits.
- All staff members and physicians are educated on the many opportunities for hand hygiene, taking into consideration contact with the patient as well as the environment.
- Staff members are regularly provided education on infection rates.
- Every patient is shown an educational video at the beginning of their stay encouraging them to remind their health care providers and visitors to perform hand hygiene.
- Every patient receives a personal, travel-size bottle of hand sanitizer in the welcome packet to encourage frequent patient hand hygiene.
- Hand sanitizer dispenser placement was reassessed and in some areas relocated to improve hand hygiene compliance and workflow.

According to the World Health Organization, compliance with hand hygiene practices among health care providers has historically averaged 39 percent. Through the above efforts, HOI staff has achieved compliance as high as 100 percent and strives to maintain 90 percent or above compliance to minimize the risk of infection.

“THROUGH INCREASED AWARENESS, ALONG WITH GREATER ACCESS TO HAND HYGIENE DISPENSERS, MAJOR BARRIERS TO HAND HYGIENE HAVE BEEN OVERCOME AND FREQUENT HAND HYGIENE HAS BECOME PART OF OUR CULTURE.”

TERRY ROTH, BSN, RN, CNOR, EXECUTIVE DIRECTOR, PERIOPERATIVE SERVICES

HOI – Overall Hand Hygiene Compliance (Higher is Better)

Source: Hoag Orthopedic Institute infection prevention audit.
PERFORMANCE IMPROVEMENT

Ongoing Performance Improvement (PI) initiatives at HOI are at work throughout the enterprise. HOI uses Lean Six Sigma, a proven strategy to increase patient satisfaction, reduce errors, reduce waste and activities that do not add value, and streamline everyday processes to maximize the organization’s productivity. HOI’s leadership team has undergone Lean Six Sigma training to create organization-wide cultural change and sustain Lean practices.

FALL PREVENTION

All patients at HOI are considered at risk for falls. HOI team members realized that the applications for fall prevention were very generalized and did not meet HOI’s specific needs. A multidisciplinary Falls Committee was created to specifically identify actions that would keep HOI patients safe. Subsequently, the committee developed and launched a safety initiative with these elements:

- A patient/family education falls video was created and can be accessed from the television in the patient’s room.
- Pre-op staff provides fall prevention guidelines to the patient and family.
- Patients and families read the guidelines while waiting to have surgery.
- Staff inquire whether this education on fall prevention has been read and understood.
- A staff RN verifies that this education was provided.

Since implementation of these measures in FY14, there was less than one fall per 1,000 patient days. Reassessment of fall risk and prevention is an ongoing priority.

IMMUNIZATION IMPROVEMENT

Influenza and pneumonia (PNA) vaccinations are two clinical care processes reported to Centers for Medicare & Medicaid Services (CMS). Compliance with these core measures is publicly reported, and the measures serve as quality indicators for HOI. The value-based purchasing CMS incentive program has included flu vaccination as a clinical care process measure for FY 2016. In order to receive full points for this measure in the 2016 VBP program, HOI needs to meet the CMS benchmark of 98.9 percent compliance.

HOI’s goal is to be 100 percent compliant with influenza and pneumonia vaccinations. As of October 2014, HOI had a compliance rate of 98.6 percent for flu vaccinations and 97.2 percent compliance for PNA.

A review of immunization fallouts (noncompliance) for FY 2014 showed opportunities in documentation, patient screening, registration and coding.

Immunization screening of these patients, previously done on paper, is now done electronically. Staff education was provided to reinforce the screening process, and visual reminders to aid in compliance were posted.
PATIENTTOUCH®: A SAFER MEDICATION STRATEGY

Medication errors reported to the FDA most commonly stem from poor communication; misinterpreted handwriting; drug name; label confusion and packaging. Medication administration in the health care setting has become safer – more accurate – in the past decade with adoption of bar codes and electronic medical records.

To maximize patient safety and achieve Meaningful Use (the government’s incentive system to promote electronic health records and safer practices), HOI invested in PatientTouch, an evolved barcode-based patient medication and therapy management system. Authorized nurses can administer medications, confirm administration accuracy, and collect and capture clinical data at the bedside. Nurses use PatientTouch to scan barcodes on their own badges, the patient’s wristband, and the medications. To further protect patient confidentiality, this handheld device deactivates if taken off the premises.

PatientTouch provides a compact and portable electronic medication administration record (eMAR) for the “right” care: the right patient receives the right medication, the right dose, right route, at the right time for the right indication. It ensures the patient has the appropriate (right) response to the medication, and that the medication administration is documented for future reference in the hospital’s electronic medical record. The device has a built-in medication library, providing clinical staff with information to educate patients on the indications and side effects of medications.

“OUR NURSES RELY ON THE MOST UPDATED INNOVATIONS TO STREAMLINE WORK FLOW AND TO ENSURE THE SAFEST POSSIBLE MEDICATION ADMINISTRATION.”

REBECCA ISRAEL, BSN, RN, CPHRM, CPHQ, DIRECTOR OF RISK MANAGEMENT, PATIENT SAFETY & REGULATORY COMPLIANCE
Measuring hospital noise level is an important aspect of our patient satisfaction survey. HOI’s survey revealed that some patients were bothered by squeaky wheels, doors opening and closing, and other noises that the staff had grown accustomed to but prevented rest during the patient’s hospital stay.

A multidisciplinary team was created to look at ways to reduce the noise level and promote a quiet, healing atmosphere. Key steps in this project included educating and involving staff in opportunities to identify and decrease the noise level and unnecessary noise. HOI implemented quiet times to further ingrain a healing environment as an organizational goal.

To continue to enhance the patient experience, HOI staff devised, assembled and in May 2014 began distributing Relaxation Kits to hospitalized patients. The kit contains earplugs, satin light-blocking sleep masks, soothing herbal tea to promote sleep, and a message inviting guests to view the 12 different calming, scenic videos found on their televisions. Patients’ verbal and written feedback on the Relaxation Kits has been overwhelmingly positive, with some even comparing their HOI stay to that of a five-star hotel or luxurious boutique.

HOI was one of 32 orthopedic groups participating in the 2014 Institute for Healthcare Improvement (IHI) Joint Replacement Learning Community (JRLC). Organizations from across the U.S. as well as international groups participated in the 12-month learning community on measuring outcomes and reducing costs for knee and hip replacements, with the goal of ensuring high-value care.

Faculty from IHI and Harvard Business School taught participants how to perform time-driven activity-based costing and improve clinical outcomes. While focusing on hip and knee replacement, the HOI project team adapted the methodology to other orthopedic procedures, and applied it to further refine HOI’s bundled payment program.

As a result, HOI’s joint class participation rose, discharge disposition to home increased, and HOI’s cost savings, annualized, is estimated to exceed $700,000.
HARVARD BUSINESS SCHOOL CASE STUDY

The success of HOI as a model for value-driven health care is now the subject of a Harvard Business School (HBS) Case Study. In September 2014, Senior Fellow and Marvin Bower Professor of Leadership Development Emeritus Robert S. Kaplan, PhD, and Project Leader for Value-Based Health Care Delivery Jonathan Warsh, PhD, traveled to HOI to meet with key leaders to discuss various strategic and operational challenges that have confronted HOI over the last several years. They then authored the 2014 Hoag Orthopedic Institute business case, which examines HOI’s innovations in outcomes measurement, cost reduction and reimbursement, plus the challenges and opportunities for future success in a changing health care landscape.

Several HOI executives observed Kaplan teaching the case at HBS to the senior health care executives and physicians who attended the January 2015 offering of the Strategy for Health Care Delivery program, chaired by Professor Michael Porter, PhD. The case will continue to be prominently featured in HBS health care executive programs and will, through the distribution of the HBS publishing division, be available for teaching at business, public health, and medical schools across the nation and the world.

ICHOM PARTNERSHIP

Through the non-profit International Consortium of Health Outcomes Measurement (ICHOM), top health care providers are developing and driving adoption of global standards for how patient-reported outcomes are measured. ICHOM’s mission, to unlock the potential of value-based health care by better defining the patient experience, is based on a framework from Harvard Business School Professor Michael E. Porter, PhD.

By 2017, ICHOM aims to have published 50 Standard Sets covering more than 50 percent of the global disease burden. In July 2014, to standardize quality measurement for hip and knee osteoarthritis, ICHOM launched an international working group that includes HOI thought leaders.
BUNDLED PAYMENTS

Medicare has traditionally made separate payments to providers for each of the individual services they furnish to beneficiaries for a single illness or course of treatment. This system has resulted in fragmented care with minimal coordination among providers and across health care settings. Payments rewarded the quantity of services offered by providers, rather than the quality of care furnished.

Next generation health care is all about optimizing patient outcomes while minimizing expenses. The Affordable Care Act includes tools to improve the quality of health care that can also lower costs for taxpayers and patients. Research has shown that bundled payments can align incentives for providers, including hospitals, post-acute care providers and physicians, and encourages them to work closely together across all specialties and settings.

Transitioning to a value-based system requires new delivery and business models. Under the CMS Bundled Payments for Care Improvement initiative, organizations revise their infrastructure to enter into payment arrangements that include financial and performance accountability for episodes of care.

HOI has developed a bundled payment program with three local commercial payers, which covers facility and professional costs for certain procedures and includes a warranty period. Two global payment programs cover facility and professional costs during the surgical episode. One of these is for cash-pay accounts, and the other involves a third-party administrator that coordinates medical travel cases for self-insured employers.

The bundled payment initiative was launched by CMS in 2013, yet HOI became an early adopter of the bundled payment model in 2011, and was the lead hospital in the California bundled payment pilot for the commercial payer market. Since that time, Cigna, Aetna and Blue Shield have continued to contract with HOI on bundled payments for joint replacement procedures. So far, more than 250 bundled payment episodes have been generated.

HOI has achieved high levels of patient satisfaction through its bundled payment plans. Advantages the bundled and global payment models provide to payers and patients include price transparency and predictability for specific procedures and care pathways. The HOI bundle payment program is also available to self-pay patients and to self-insured employers via their third party plan administrators.
“OUR FOCUS IS IN ENCOURAGING THE ALIGNMENT BETWEEN CONSUMERS AND PROVIDERS THROUGH TRAVEL MEDICINE, QUALITY REPORTING, AND PRICE TRANSPARENCY. INITIATIVES THAT REWARD EFFICIENCY AND QUALITY BENEFIT US ALL.”

JAMES CAILOUETTE, MD, CHIEF STRATEGY OFFICER


MEDICAL TRAVEL PROGRAM

The Medical Travel Program that began at HOI in 2011 has seen steady gains. Because HOI contracts with all major payers, many out-of-area employers can negotiate with their insurance providers to send patients to HOI as a tactic to improve health care while managing costs. As a Blue Distinction Center® for Specialty Care, HOI is among a select number of facilities nationwide approved by Blue Cross and Blue Shield to receive travel patients. It is attractive to out-of-area patients and payers for several reasons:

- Allows patients, regardless of where they live, to access a national orthopedic center of excellence.
- Assures value because lower quality care ultimately results in higher costs.
- Bundled or global rates covering all provider fees are easy for payers to manage. Knowing the total cost of care upfront simplifies administrative claim work while providing cost controls.

Hoag Orthopedic Institute Travel Patient Care Plan

For more information and a comprehensive travel patient care plan, visit www.orthopedichospital.com/travelprogram

Gabrielle White, RN, CASC
Executive Director of Ambulatory Services & Network Development
949-515-7669
gwhite@oscoc.com
As outlined in the Affordable Care Act, the purchasing program is based on the concept that buyers should hold providers of health care accountable for cost, quality of care and the patient care experience. VBP is intended to reduce below-standard care through financial penalties, as well as identify and reward the best-performing providers. Hospitals receive incentive payments based on how well they perform and how much their outcomes improve relative to national performance.

The VBP program began with 20 measures for FY 2013, increased to 24 measures for FY 2014 and will expand to 26 measures in FY 2015. VBP requires CMS to withhold 1.25 percent of Medicare revenues in FY 2014, rising to 2 percent by FY 2017. Revenues will then be redistributed based on quality performance compared to the national mean. Providers’ overall scores will be determined based on quality measures in four VBP domains:

- **Clinical Care Domain**, which has two sub-domains – Process and Outcome
- **Patient Experience of Care**
- **Efficiency**
- **Safety**

Hospitals will receive payments based on their quality performance for previous years. In fiscal year 2015, CMS could potentially withhold 1.5%, if hospitals fail to meet quality standards. HOI met or exceeded CMS quality standards on measured metrics and will receive an additional 1.16% incentive for providing quality care.

**Value Based Purchasing Incentive and Withholding Percentage**

<table>
<thead>
<tr>
<th>1.5%</th>
<th>1.16%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td></td>
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<tr>
<td>0</td>
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<tr>
<td>-0.5</td>
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<tr>
<td>-1</td>
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<td>-1.5</td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td></td>
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</tbody>
</table>


“BUNDLED PAYMENTS HAVE YET TO REACH FULL POTENTIAL. BUT THERE ARE AMBULATORY SURGERY CENTERS THAT DEMONSTRATE COST-EFFECTIVE, SUCCESSFUL PROGRAMS. THE ORTHOPEDIC SURGERY CENTER OF ORANGE COUNTY, IN NEWPORT BEACH, CA, HAS **EFFECTIVELY RUN A BUNDLED PAYMENTS PROGRAM** SINCE 2008.”

*BECKER’S ASC REVIEW – OCTOBER 2014*
To best serve patients in Orange County, HOI has two ambulatory surgery centers (ASCs), in Orange and Newport Beach. Both are well established, state-of-the-art centers providing the highest quality outpatient surgery care available for a full range of simple and complex musculoskeletal procedures. Each consistently garners "recommend the hospital" patient survey scores between 99 and 100 percent. Both are Medicare-certified and hold full accreditation with the Accreditation Association for Ambulatory Health Care (AAAHC). Yet each has developed its own unique service lines in response to the communities they serve. MSSSC is a multi-specialty ambulatory surgery center, while OSCOC exclusively services orthopedic patients.

Main Street Specialty Surgery Center Fiscal Year 2014 Procedural Volume

- Orthopedics: 2,399
- Other Specialty: 2,565
- Pain Management: 2,296

Orthopedic Surgery Center of Orange County Fiscal Year 2014 Procedural Volume

- Orthopedics: 604
- Pain Management: 2,832

Source: MSSSC and OSCOC administrative data FY13
### Selected Outpatient Procedure Volumes, for MSSSC and OSCOC Combined

<table>
<thead>
<tr>
<th>Procedure Description</th>
<th>FY 2014</th>
<th>FY 2013</th>
<th>FY 2012</th>
<th>FY 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SHOULDER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Shoulder Repair Tendon - Open Rotator Cuff</td>
<td>9</td>
<td>4</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Open Claviculectomy - Partial</td>
<td>39</td>
<td>25</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Open Acromioplasty</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Arthroscopic Shoulder Capsulorrhaphy</td>
<td>111</td>
<td>117</td>
<td>86</td>
<td>105</td>
</tr>
<tr>
<td>Slap Lesion Repair</td>
<td>34</td>
<td>46</td>
<td>27</td>
<td>42</td>
</tr>
<tr>
<td>Debridement</td>
<td>143</td>
<td>144</td>
<td>70</td>
<td>20</td>
</tr>
<tr>
<td>Extensive Debridement</td>
<td>261</td>
<td>295</td>
<td>81</td>
<td>68</td>
</tr>
<tr>
<td>Mumford</td>
<td>96</td>
<td>85</td>
<td>24</td>
<td>15</td>
</tr>
<tr>
<td>Sub Acromial Decompression (SAD) w/ Partial Acromioplasty</td>
<td>223</td>
<td>366</td>
<td>31</td>
<td>121</td>
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<tr>
<td>Rotator Cuff with/without SAD</td>
<td>375</td>
<td>397</td>
<td>297</td>
<td>267</td>
</tr>
<tr>
<td><strong>WRIST/HAND/FINGER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Wrist/Hand/Finger Repair Wrist/Hand Joint - Trapeziectomy</td>
<td>101</td>
<td>121</td>
<td>104</td>
<td>69</td>
</tr>
<tr>
<td>Pinning Metacarpal Fracture</td>
<td>42</td>
<td>69</td>
<td>80</td>
<td>73</td>
</tr>
<tr>
<td>Orif Distal Radius</td>
<td>202</td>
<td>186</td>
<td>190</td>
<td>126</td>
</tr>
<tr>
<td>Trigger Finger</td>
<td>426</td>
<td>463</td>
<td>270</td>
<td>257</td>
</tr>
<tr>
<td>Excision Ganglion - Hand or Finger</td>
<td>207</td>
<td>166</td>
<td>145</td>
<td>160</td>
</tr>
<tr>
<td>Open Carpal Tunnel Release</td>
<td>366</td>
<td>407</td>
<td>478</td>
<td>365</td>
</tr>
<tr>
<td>Arthroscopic Wrist/Hand/Finger Endoscopic Carpal Tunnel</td>
<td>245</td>
<td>249</td>
<td>266</td>
<td>219</td>
</tr>
<tr>
<td><strong>KNEE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Knee                      Partial Knee Replacement</td>
<td>21</td>
<td>19</td>
<td>20</td>
<td>37</td>
</tr>
<tr>
<td>Arthroscopy With Synovectomy</td>
<td>49</td>
<td>88</td>
<td>71</td>
<td>90</td>
</tr>
<tr>
<td>Major Synovectomy - 2 or More Compartments</td>
<td>84</td>
<td>122</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>Chondroplasty/Debridement</td>
<td>70</td>
<td>83</td>
<td>90</td>
<td>97</td>
</tr>
<tr>
<td>Meniscetomy - Medial or Lateral</td>
<td>1,301</td>
<td>1,369</td>
<td>1,315</td>
<td>1,296</td>
</tr>
<tr>
<td>Meniscus Repair - Medial or Lateral</td>
<td>80</td>
<td>87</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td>Anterior Cruciate Ligament (ACL) Reconstruction</td>
<td>262</td>
<td>302</td>
<td>341</td>
<td>327</td>
</tr>
<tr>
<td><strong>HIP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Hip                      Total Hip Arthroplasty</td>
<td>21</td>
<td>23</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td><strong>FOOT/ANKLE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Foot/Ankle ORIF Ankle</td>
<td>56</td>
<td>78</td>
<td>70</td>
<td>59</td>
</tr>
<tr>
<td>Hammer toe</td>
<td>108</td>
<td>164</td>
<td>56</td>
<td>53</td>
</tr>
<tr>
<td>Hallux Rigidus Correction - Chellectomy</td>
<td>71</td>
<td>88</td>
<td>105</td>
<td>66</td>
</tr>
<tr>
<td>Bunionectomy</td>
<td>145</td>
<td>155</td>
<td>184</td>
<td>154</td>
</tr>
<tr>
<td>Pain Management</td>
<td>4,073</td>
<td>3,261</td>
<td>3,075</td>
<td>2,952</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>9,224</td>
<td>8,984</td>
<td>7,596</td>
<td>7,140</td>
</tr>
</tbody>
</table>

Source: MSSSC and OSCOC administrative data FY13

"HOI’S AMBULATORY SURGERY CENTERS ARE KEY DRIVERS OF VALUE-BASED CARE. WE ARE CONSTANTLY EVALUATING AND CREATING NEW, CLINICALLY APPROPRIATE PROTOCOLS, LEVERAGED BY OUR ADVANCED ORTHOPEDIC AND PAIN MANAGEMENT CAPABILITIES."

GABRIELLE WHITE, RN, CASC, EXECUTIVE DIRECTOR, AMBULATORY SERVICES & NETWORK DEVELOPMENT
PAIN MANAGEMENT EXPERTISE

An important aspect of complex procedures is specialized pain control. MSSSC and OSCOC provide care on the forefront of pain control using anesthesia technology that is perfectly suited for ambulatory surgery. All of the anesthesiologists have advanced training in peripheral regional anesthesia, an advanced therapy utilizing nerve blocks.

The nerve blocks utilized are designed to provide an array of benefits. They facilitate the surgery, provide for extended pain management, and allow for early discharge. Nerve blocks are utilized for postoperative pain control, and they are usually limited to the area of surgical interest. Moreover, they limit the need for excessive sedation during surgery. Taking less medication is known to reduce potential side effects such as nausea and drowsiness. Additional benefits include faster and easier rehabilitation, reduced dependence on caregivers due to faster recovery time, and a dramatic reduction in post-surgical pain. More complex procedures utilize a pain control catheter that allows for extended pain relief.

PREVENTING INFECTIONS

One way that HOI ASCs sustain concentrated focus on patient safety is by preventing infections. The whole team is responsible and empowered to prevent infections. Through monthly monitoring, employee education and best practices, year after year MSSSC and OSCOC uphold very low infection rates ranging between 0.1 and 0.3 percent – well below the national average.

HOI Ambulatory Surgery Center FY 2014 Infection Rates
(Percent - Lower is Better)

<table>
<thead>
<tr>
<th>National</th>
<th>HOI ASC (MSSSC and OSCOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.43%</td>
<td>0.15%</td>
</tr>
</tbody>
</table>

Source: Accreditation Association for Ambulatory Health Care; HOI Quality dashboard
On-time, pre-operative administration of antibiotics is considered a best practice to prevent surgical site infection.

**Prophylactic IV Antibiotic Administration On-Time – Per ASC SCIP Protocol**

(Percent - Higher is Better)

<table>
<thead>
<tr>
<th>National</th>
<th>HOI ASC (MSSSC and OSCOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>88</td>
<td>92.00%</td>
</tr>
<tr>
<td>92</td>
<td>99.18%</td>
</tr>
<tr>
<td>94</td>
<td></td>
</tr>
<tr>
<td>96</td>
<td></td>
</tr>
<tr>
<td>98</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: Accreditation Association for Ambulatory Health Care; HOI Quality dashboard

**AMBULATORY SURGERY CENTERS CONTINUED**

**VALUE-BASED CARE**

There is a growing trend across the U.S. to move healthier patients from the hospital to the short stay or ambulatory surgery center setting for surgery. ASCs offer high quality, efficient and customer-focused care at a lower cost. All of these attributes contribute to value-based care and benefit the patient, the payer and self-funded employers.

With its private, overnight recovery rooms, HOI’s surgery centers offer a more extensive surgical list in the ambulatory setting. OSCOC has been very successful with outpatient total hip replacements for the healthier population. Patients receive all the same protocols for joint replacement as in a hospital setting; however, they also receive one-on-one nursing care throughout the entire recovery phase. They are up and walking within hours of surgery and walking out the door to go home by the next morning.

With appropriate medical criteria and protocols, ASCs can safely offer what have always been considered hospital-based surgical domains, such as joint replacement and spine procedures, with comfortable and safe discharge home in a matter of hours.
SPORTS MEDICINE
Among OSCOC and MSSSC board-certified physicians, many focus on sports medicine as a primary or secondary specialty. Both centers provide all current technologies and equipment to aid in the expert, evidence-based repair of musculoskeletal injuries. Minimally invasive treatment strategies help motivated patients, from world-class athletes to fitness-minded individuals, to recover as quickly as possible and return to their sport.

2014 Sports Medicine Procedures

![Pie chart showing 1,846 procedures with 1,243 for shoulder and 603 for knee.]

Source: HOI internal data

2014 CMS QUALITY REPORTING DATA
CMS standardized measures for FY 2014 pertaining to the quality of care for patients in the ASC setting include: patient burns; patient falls; wrong site, wrong side, wrong patient, wrong procedure, wrong implant; hospital transfer/admission; and prophylactic intravenous antibiotic timing.

HOI Ambulatory Surgery Centers
Patient Safety (Lower is Better)

<table>
<thead>
<tr>
<th>PATIENT SAFETY MEASURES</th>
<th>NATIONAL RATE</th>
<th>HOI ASC (MSSSC &amp; OSCOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac and/or respiratory arrest</td>
<td>0.13%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Hemorrhage/excessive bleeding</td>
<td>0.10%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Medication error</td>
<td>0.70%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Post surgical wound infections</td>
<td>1.43%</td>
<td>0.15%</td>
</tr>
<tr>
<td>Other complications</td>
<td>3.15%</td>
<td>0.15%</td>
</tr>
<tr>
<td>Hospital transfer</td>
<td>1.48%</td>
<td>0.10%</td>
</tr>
<tr>
<td>Return to surgery within 48 hours</td>
<td>0.20%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Wrong site, side, procedure, implant</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Source: MSSSC and OSCOC Quality dashboard
For the third year in a row, Hoag Orthopedic Institute was the **highest volume provider of joint replacement procedures in the state of California** based on 2013 data (released in December 2014) from the Office of Statewide Health Planning and Development (OSHPD), with more than 2,700 joint replacements performed.

**Consumer Reports** named HOI as one of only 34 hospitals in 20 states to earn its **highest rating for hip surgery**; and one of 128 hospitals in 34 states to earn its **highest rating in knee surgery**. Published on [www.consumerreports.org](http://www.consumerreports.org), this was the second annual analysis by Consumer Reports of how Medicare patients fare on joint replacement procedures.

A new online hospital assessment tool for 2014, [www.nerdwallet.com](http://www.nerdwallet.com), places HOI first on its list of the best hospitals for hip and knee procedures. Their criteria included outcomes, number of procedures performed, patient satisfaction and cost, among other parameters from Medicare and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) data.

Online at [Medicare.gov/HospitalCompare](http://www.medicare.gov/hospitalcompare/search.html), using data from Centers for Medicare & Medicaid Services (CMS), HOI **ranked first among area hospitals, and exceeded state and national scores in every Patient Experience category**. HOI Patient Experience scores also surpassed leading hospitals nationwide. HOI scored **“Better than U.S. National Rate” on available outcome comparisons** such as Rate of Unplanned Readmission after Hip/Knee Surgery and Rate of Complications for Hip/Knee Patients.

**U.S. News & World Report** named Hoag Orthopedics as a “Best Hospital” in 2013 and 2014. Hoag Orthopedics was one of the 50 out of 1,646 hospitals nationwide named for orthopedic inpatient excellence, based on factors such as reputation, survival, safety, volume, nurse staffing, advanced technologies and key inpatient services that were provided from 2011 to 2013.

In September 2014, **Becker’s Hospital Review** researched and listed HOI among the “**125 hospital and health systems with great orthopedic programs.**” [http://www.beckershospitalreview.com/100-hospitals-and-health-systems-with-great-heart-programs/full-list.html](http://www.beckershospitalreview.com/100-hospitals-and-health-systems-with-great-heart-programs/full-list.html)

**Harvard Business School (HBS)** chose HOI for a business case study in value-driven health care. The case was written in 2014 and will be taught in HBS health care executive programs and published for global learning. It examines HOI’s **innovations in outcomes measurement, cost reduction and reimbursement**, plus the challenges and opportunities for future success in a changing health care landscape.


Irvine Public School Foundation named HOI as one of the 2015 **“Top 100” businesses** supporting a world-class education for 32,000 students attending public schools in Irvine.

HOI is **one of the elite American hospitals with ISO 9001 certification** from DNV GL Healthcare, Inc. With 165 member countries, the International Organization for Standardization (ISO) is the world’s largest developer and publisher of international standards for quality. The ISO benchmark demonstrates safety and reliability in healthcare. HOI has utilized the voluntary ISO certification process to proactively prevent problems, streamline workflow, increase productivity, and maximize patient satisfaction.
HOI’s readmission rate was recognized in Becker’s Healthcare for having the second lowest all-cause readmission rate in the nation. The national 30-day rate of readmissions after hospital discharge was 16 percent, according to the latest available data (July 2011 through June 2012) from CMS’ Hospital Compare website.

The California HealthCare Foundation, Pacific Business Group on Health and the California Orthopaedic Association launched the California Joint Replacement Registry (CJRR) pilot in 2011 to address California’s unmet need for comprehensive, scientific assessment of factors influencing the outcomes of hip and knee replacement surgeries, and enable better decision-making by patients, purchasers, physicians and hospitals. As one of three original hospitals in the state volunteering for the registry and in 2014 the largest contributor to the expanding CJRR database, HOI is recognized for its commitment to improving value-based treatment decisions and joint replacement care delivery.

HOI participated in the Joint Replacement Learning Community, an Institute for Healthcare Improvement (IHI) initiative supported by Harvard Business School faculty. Data revealed that HOI has one of the lowest costs of the 29 U.S. and three international hospitals participating in the Joint Replacement Learning Community.

In 2012, 2013 and 2014 Blue Cross Blue Shield Association named HOI a Blue Distinction Center for high-quality knee and hip replacement for delivering high-quality and safe specialty care based on criteria that directly impacts patient results, such as surgical team expertise and a history of better outcomes for patients.

HOI received the 2014 Guardian of Excellence Award from Press Ganey, the leading nationally recognized expert in patient feedback and satisfaction, for reaching the top five percent in HCAHPS surveys for each quarter.

The non-profit Integrated Healthcare Association (IHA) uses HOI as an exemplar of early and successful implementation of its bundled payment model, developed to encourage redesigned practice patterns rather than traditional fee-for-service payment models. HOI had the highest volume of episodes of care among hospitals in the IHA pilot program.

HOI is an active member of the California Hospital Patient Safety Organization (CHPSO). As a leader in the analysis, dissemination and archiving of patient safety information, CHPSO identifies clinical patterns that cause medical errors; develops and conveys best practices; and shares lessons learned. CHPSO’s vision is for its members to lead the nation in providing the safest and highest quality health care.

HOI has sustained its efforts that led to the hospital receiving a Leadership in Energy and Environmental Design (LEED) Silver Certification from the United States Green Building Council for its environmentally friendly design.

HOI received Skylight® Healthcare Systems “Programs to Achieve Improved Quiet at Night” and “Patient and Staff Engagement” awards.

“RECEIVING CONSUMER REPORTS’ HIGHEST RATING FOR KNEE AND HIP SURGERIES IS SIGNIFICANT BECAUSE THEY ARE UNBIASED AND USE THE BEST AVAILABLE DATA TO HELP CONSUMERS COMPARE HOSPITAL PERFORMANCE AND MAKE INFORMED HEALTH CARE CHOICES.”

ANDREW GERKEN, MD, CHAIR, DEPARTMENT OF SURGERY
ORTHOPEDIC EDUCATION AND RESEARCH INSTITUTE (OERI)

Orthopedic Education and Research Institute (OERI) is a 501(c)(3) non-profit corporation founded by Hoag Orthopedic Institute physicians. HOI President Carlos Prietto, MD, serves as the OERI executive director, and Vance Gardner, MD, is OERI’s new medical director.

LEADERSHIP Q & A

Dr. Prietto, how has OERI progressed this year?
Momentum grew in education, research and community outreach – OERI’s three key functions. It’s been fun to feel the groundswell under us from the growing level of interest and involvement by the medical community.

This past June we were fortunate to welcome a medical director with a strong orthopedic and academic background who is well liked and respected in our area. As a fellowship-trained spine surgeon who practiced in Orange County for many years, served as faculty in the Department of Orthopaedic Surgery at UCI, has extensive clinical research experience and values charitable endeavors, he is ideally suited to lead OERI. Dr. Gardner has the rare ability to see the potential in people he works with and to develop that potential.

What were some specific gains made in OERI’s educational pursuits?
OERI is quickly becoming one of a handful of elite, post-residency orthopedic training programs across the country. In the previous two years until his retirement, Dr. (Michael) Patzakis, an emeritus professor at USC School of Medicine, laid an excellent foundation for a true clinical fellowship program. Last year, one physician completed the OERI orthopedic research fellowship. Three more physicians came this past August for two arthroplasty fellowships and the established clinical research fellowship. For 2015/2016 we plan to offer the following fellowships:
• Adult Reconstruction and Musculoskeletal Oncology (2)
• Spine (1)
• Sports Medicine (2)
• Orthopedic Research (1)

In addition, in 2014 we brought on a clinical research manager as well as a program assistant, established robust participation from 15 clinical faculty members, and secured numerous clinical affiliations to support these programs.

We’re pursuing accreditation for our planned sports medicine fellowships from the Accreditation Council for Graduate Medical Education (ACGME) to demonstrate excellence in the clinical learning environment and curriculum, and in evaluating the competency of our fellows. This requires sponsorship by a university with an orthopedic residency, which we were very pleased to secure with Loma Linda University, renowned for its health-sciences educational programs. ACGME will make a site visit to HOI in January.

Dr. Gardner, what’s behind the traction OERI is gaining in its educational and research pursuits?
OERI fills a void in Orange County, where there are no other orthopedic fellowship programs and we have only one medical school. At least 75 percent of surgical residents go on to fellowship training, a trend that we can expect to increase. We have the capacity to provide great training
right here. And because many orthopedic surgeons want to stay here or come here to be trained, we’re seeing a high demand for our fellowship positions. Within five years we expect to be the premier provider for continuing and ongoing musculoskeletal education of doctors, as well as nurses, physician assistants and other medical professionals.

Hip replacement procedures are expected to increase 174 percent in the next 20 years, and knee replacements will rise as much as 673 percent, according to a study presented at the 73rd Annual Meeting of the American Academy of Orthopedic Surgeons. We as a nation do not have enough orthopedic surgeons to meet demands, and many of the surgeons now practicing will soon retire. Orthopedics is one of the more collaborative specialties, and I have no doubt many of the clinicians who train and develop professional relationships here will stay to meet the need for great care in this community.

Along with this burgeoning need for quality education, I believe we are on the cusp of a revolution in orthopedics. There will soon be more arthroscopic treatment of diseases that once required large incisions and substantial rehabilitation. In the next 20 years, implants currently made of metal, plastic and other synthetics will become a hybrid with biologic materials such as cartilage, bone and stem cells. We encourage our clinicians and physicians to pursue orthopedic research and participate in clinical trials that will deepen expertise in key areas. The research fellowship position we created reflects the priority we place on contributing to tomorrow’s medical knowledge and capabilities. We hold monthly research update presentations, and require our research fellow to complete two robust research projects with manuscripts for publication to be completed by the end of the fellowship year.

Providing medical education and conducting research is enthusiastically supported by our medical staff and leadership, not only because it makes us better at what we do; it also ensures we’ll be at the forefront of advances in next generation orthopedic care.

How is OERI making an impact through community outreach?

Access to surgical care remains a major challenge for many people in Orange County. OERI has chosen to be part of the solution. Most doctors provide free care, but without a facility or collaboration with other doctors they are limited in what they can do on their own. OERI makes it easier for surgeons and other physicians to give back to their community and empowers them to do more.

We are still in the early stages of leveraging our potential to reach those who need help the most. In 2014 we received funding for OERI’s non-profit mission of education, research and community outreach through a grant from the Hoag Hospital Foundation. We expect to secure future funding from government and industry grants, private endowments, physicians, vendors who support what we do, and HOI’s grateful patients.

“OERI is quickly becoming one of a handful of elite post-residency orthopedic training programs across the country.”

CARLOS PRIETTO, MD, PRESIDENT AND OERI EXECUTIVE MEDICAL DIRECTOR
“PROVIDING MEDICAL EDUCATION AND CONDUCTING RESEARCH IS ENTHUSIASTICALLY SUPPORTED BY OUR MEDICAL STAFF AND LEADERSHIP, NOT ONLY BECAUSE IT MAKES US BETTER AT WHAT WE DO; IT ALSO ENSURES WE’LL BE AT THE FOREFRONT OF ADVANCES IN NEXT GENERATION ORTHOPEDIC CARE.”

VANCE GARDNER, MD, OERI MEDICAL DIRECTOR

RESEARCH AND EDUCATION CONTINUED

FELLOWSHIP PROGRAM, 2014/2015

Total Joint Arthroplasty Clinical Fellowship
Program Director:
Robert S. Gorab, MD

Associate Program Director:
Steven L. Barnett, MD

Faculty:
Jay J. Patel, MD
Nader A. Nassif, MD
Stephen A. Mikulak, MD
Steven H. Gausewitz, MD

Fellows:
Jason H. Lee, MD (UC Irvine)
Dominic J. Peters, MD (Michigan State University)

Spine Clinical Fellowship
Faculty:
Jeffrey E. Deckey, MD
Jeremy S. Smith, MD
Jon I. White, MD
Richard S. Lee, MD

Fellow:
1 position pending

Sports Medicine Clinical Fellowship
Program Directors:
Robert C. Grumet, MD
David S. Gazzaniga, MD
Carlos A. Prietto, MD

Faculty:
Alan H. Beyer, MD
Scott P. Fischer, MD
David W. Kruse, MD
Russell S. Petrie, MD
Miguel P. Prietto, MD

Fellow:
2 positions pending

Orthopedic Research Fellowship
Program Director:
Vance Gardner, MD

Fellow:
Akil P. Simon, MD (SUNY, Stony Brook University)

STUDENT ROTATIONS

This past year, HOI welcomed students in nursing, physical therapy and surgical technician programs from the following schools for hospital training rotations and preceptorships:
- Azusa Pacific University
- Brandman University
- California State University Long Beach
- CNI College
- Concordia University
- Cypress College
- Loma Linda University
- Vanguard University
- Western University

STATE, NATIONAL AND INTERNATIONAL COLLABORATIVES

- California Joint Replacement Registry (CJRR)
- Harvard Business School
- Institute for Healthcare Improvement (IHI)
- International Consortium for Health Outcomes Measurement (ICHOM)
- Own the Bone
“IT WAS CLEAR FROM THE SITE VISITS TO HOI THIS PAST YEAR THAT HEALTH CARE PROFESSIONALS HAVE EMERGING VIEWS OF HOSPITALISTS AS INTEGRAL TO VALUE-BASED CARE. HOI HOSPITALISTS PLAY A CRITICAL ROLE IN PATIENT SAFETY, COORDINATION OF MEDICAL CARE AND THE OVERALL HIGH-QUALITY DELIVERY OF ORTHOPEDIC SERVICES.”

ROBERT CHO, MD, MEDICAL DIRECTOR OF HOSPITALIST SERVICES

2014 SITE VISITS
HOI welcomes professionals from around the U.S. and the world to visit and learn firsthand how its best practices and novel strategies are implemented. This year, representatives from the following organizations came to HOI and met with the institute’s team:
• West Coast University
• Irvine Chamber of Commerce
• Castlight Health
• Cottage Health System
• Harvard Business School
• North Central Baptist Hospital
• Scripps Health

PODIUM PRESENTATIONS BY HOI MEDICAL STAFF*


Gorab RS. “Revision Total Knee Replacement with Porous Metaphyseal Sleeves.” University Hospital of Larissa. Larissa, Greece. September 2014.


Gorab RS. “Outpatient Unicompartmental Knee Arthroplasty.” University Hospital of Larissa. Larissa, Greece. September 2014.


*Bold names indicate HOI affiliated physicians

2015 OUTCOMES REPORT | 39


*Bold names indicate HOI affiliated physicians


“THE MOST IMPORTANT ISSUE IS FOR ORTHOPEDIC SURGEONS TO BE VERY CLEAR AND TRANSPARENT AS TO WHY WE ARE CHOOSING A SPECIFIC INTERVENTION FOR OUR PATIENT, WHY WE ARE CONFIDENT THAT IT WILL BE EFFECTIVE, AND HOW WE WILL EVALUATE OUR RESULTS.”

STEVEN GAUSEWITZ, MD, CHIEF OF STAFF
Topics covered complex pain management; minimally invasive spine surgery; skin care with special emphasis on peri-operative pressure ulcers and skin tears; and the favorite event, a live-feed video conference from the operating room of a direct approach anterior hip replacement. During the live feed, participants were able to interact with the surgeon as the surgery was being performed. Along with the surgery, a lecture focused on anterior hip replacement and normothermia information to prevent infection and produce better patient outcomes. A specialty oncology orthopedic surgeon and oncology nurse navigator provided an introduction on the topic of sarcoma and soft tissue malignancy.

Included was a discussion on the care of the patient and family along the continuum of care from diagnosis through long-term follow-up. A presentation about the complexities of arthroscopic and total shoulder replacement was also included in the symposium. The audience enjoyed seeing a 3D model of an arthritic shoulder and how surgical outcomes are being improved due to 3D printing innovation.
COMMUNITY SERVICE & WELLNESS OUTREACH

DOCTOR IN THE DUGOUT RADIO SHOW

Doctor in the Dugout, a 30-minute radio show on KLAA Angels Radio AM 830, aired for 24 weeks on Saturdays prior to the start of the Angels' pre-game coverage. The show, hosted by HOI orthopedic surgeon and Executive Medical Director Alan H. Beyer, MD, featured special guests and provided an entertaining twist on sports medicine-related topics and events from the world of sports and sports medicine. HOI was the title sponsor for Doctor in the Dugout, and also sponsored the Injury Report for the Angels’ pre-game show. Podcasts from the show can be viewed at http://www.am830klaa.com/

WALK TO CURE ARTHRITIS

In Orange and Los Angeles Counties, more than 1.5 million people have arthritis. To fight this leading cause of disability, the Walk to Cure Arthritis held June 1, 2014, from Angel Stadium of Anaheim, raised awareness and over a half a million dollars towards a cure. Monies raised were earmarked for research, juvenile arthritis fellowships and scholarships for children to attend juvenile arthritis camp. HOI was a leading supporter of this year’s highly successful event. CEO Dereesa Purtell Reid joined Dennis Kuhl, president of Angels Baseball, and Teresa Dinh, executive director of the Arthritis Foundation, for the Walk to Cure Arthritis Kick Off Event at Angel Stadium. HOI orthopedic surgeon Stephen Mikulak, MD, was selected as the event’s medical honoree in recognition of his work in minimally invasive joint replacements and his care for arthritis patients since 1998.

COMMUNITY EVENTS

In September 2014, an estimated 1,300 community members came out for the Hoag Health & Wellness Fair held at Hoag Hospital Irvine. Guests took advantage of a variety of free health screenings and physician-led wellness presentations. Tours gave community members greater insight into the orthopedic services available.

In October 2014, a Community Health Fair held at the newly expanded Hoag Health Center in Huntington Beach drew 425 participants who benefited from free flu shots, screenings, a Medicare Basics class, physician-led mini-presentations, and information tables, including one staffed by Hoag Orthopedic Institute representatives.
OWN THE BONE

While nearly 50 percent of women and 25 percent of men over age 50 will sustain fragility fractures in their lifetime, according to the *Journal of Bone and Mineral Research* about 80 percent of fragility fracture patients do not receive appropriate osteoporosis care.

To address the osteoporosis treatment gap and prevent subsequent fragility fractures, the American Orthopaedic Association developed Own the Bone, and HOI has implemented the program. A web-based patient registry is used to ensure that HOI’s post-fracture patients and those who have osteoporosis are identified and receive appropriate evaluation, diagnosis and treatment. Measures include:

- Nutritional counseling emphasizing calcium and Vitamin D supplementation
- Physical activity counseling concerning weight-bearing exercise and fall prevention education
- Lifestyle counseling about smoking cessation and limiting excessive alcohol intake
- Pharmacotherapy
- Bone mineral density testing
- Written communications, including physician referral and patient education letters

To protect the next generation, an HOI clinical nurse specialist is making inroads into educating the community’s youth on osteoporosis prevention with “Best Bones Forever” presentations to local elementary and high school students.

COMMUNITY LECTURE SERIES

Community health education programs covered a wide range of topics:

- **Advanced Treatments for Hip and Knee Pain**
  Steven Gausewitz, MD

- **From Head to Toe: Common Sports Injuries**
  Hien Nghiem, MD, David Gazzaniga, MD

- **The Surgical Management of Hip Arthritis**
  Jay Patel, MD

- **New Techniques for Carpal Tunnel Surgery**
  Ying Chi, MD

- **Treatment for Arthritis of the Hip and Knee**
  Nader Nassif, MD

- **Non-Operative Treatment of Back Pain**
  Balaji Charlu, MD

- **The Surgical Management of Hip Arthritis**
  Jay Patel, MD

- **What You Should Know About Osteoporosis**
  Tanya Sapsezian-Barahona, BSN, RN, ONC
  Sarah Gagliardi, RD, Katie Sherlock, OTR/L

- **Elbow Injuries in Throwing Athletes**
  David Gazzaniga, MD

- **Back Pain, Is There Hope?**
  Jeremy Smith, MD

- **My Aching Feet and Ankles**
  Andrew Gerken, MD

- **Treatment Options for Common Afflictions of the Hand**
  Shaunak Desai, MD

- **Outpatient Lumbar and Cervical Disc Surgery: Your Minimally Invasive Solution**
  Michael Gordon, MD

- **What You Should Know About Osteoporosis**
  Marisa Swain, RN, Now Nguyen-Le, PT
  Sarah Gagliardi, RD

- **Treatment Options for Common Afflictions of the Hand, Wrist and Elbow**
  Grant Robicheaux, MD

- **Treatment Options for Lower Back Pain**
  Kasra Rowshan, MD
Rapid Recovery for Hip and Knee Replacement  
James Caillouette, MD

Joint Replacement, a Patient and Physician Perspective  
Alan Beyer, MD

CHARITY CARE

Hoag Orthopedic Institute’s workforce, from top leadership to staff at all levels, is passionate about volunteering. HOI has partnered with AccessOC Southern California, La Amistad de Jose Family Health Center, Share Our Selves (SOS), the SOS – El Sol Wellness Center and other outreach programs to provide health care to those in need.

LA AMISTAD FAMILY HEALTH CENTER

Hoag Orthopedic Institute has developed a partnership with La Amistad, a clinic begun nearly 30 years ago by the Sisters of St. Joseph of Orange to provide high-quality medical and dental services and education to the underserved communities. HOI came forward to offer needed orthopedic procedures to La Amistad patients at no cost. Patients who are below the poverty level have the opportunity to receive interventions in a safe environment, performed by the best orthopedic surgeons in the country. La Amistad is committed to improving the lives of individuals in need, and HOI is excited to collaborate with them towards this goal.

FUNDING FOR ATHLETIC TRAINERS IN THE IRVINE UNIFIED SCHOOL DISTRICT

In November 2014, Hoag Orthopedic Institute donated $40,000 to the Irvine Public Schools Foundation’s (IPSF) Health and Wellness Initiative. The donation helps fund athletic trainers provided by the Irvine Unified School District and IPSF for the 2014-15 academic year.

The athletic trainers are needed to identify risk factors, prevent injuries, direct appropriate medical treatment, and detect and correct health problems directly related to student athletes’ athletic performance, such as concussion risks, during and after regular school hours. Athletic trainers play a crucial role in activities such as taping, rehabilitating and educating students on sports-related injuries, according to Dr. David Gazzaniga, a sports medicine physician and surgeon at HOI and team doctor for University High School.

In appreciation for HOI’s support, IPSF recognized HOI as one of its 2015 “Top 100” businesses supporting a world-class education for the 32,000 students attending public schools in Irvine.
From studies at the Royal Winnipeg Ballet to performing and choreographing for several modern dance companies, Lori Savit loved the career that led her around the world. Into her mid-30s, she performed for audiences in the United States, Mexico and Europe and made forays into popular music, touring with the band Devo, choreographing music videos and tours and producing Emmy Award winning dance programming. All that was before the hip pain, which started when she was rear-ended in her car.

“I was born to dance and choreograph. My whole life was dedicated to movement and when I couldn’t without terrible pain, it was devastating for me,” recalls the Laguna Beach resident. “I saw some of the best sports medicine orthopedic surgeons in California, and because I was quite young, they all told me, ‘Keep your hip until you can’t stand the pain anymore.’ They recommended arthroscopic surgery but it was unsuccessful. I lived with pain in every step I took for years before finding my HOI doctor. He asked me, ‘Why wait?’”

Lori had her right hip replaced at the Orthopedic Surgery Center of Orange County (OSCOC) in Newport Beach. “I didn’t even realize my left hip hurt until the first one was fixed,” says Lori. “Since the first surgery went so smoothly, a few months later I had the second one done as well. What a relief!”

Both of Lori’s total hip replacements were done on an outpatient basis, the last in 2011. “There wasn’t a lot of pain after my hip replacement,” says Lori. “My doctor referred me to an excellent physical therapist who helped me regain strength while correcting bad habits that had developed from my chronic limp. I’m so glad that I am able to walk normally, am pain-free and can finally do a ballet barre once again.”

These days, Lori keeps busy doing what she loves. Dancing is again a part of life for Lori and her husband, Lester, as ballroom dance enthusiasts. Her days are full with running her own marketing consulting business, field training her American Brittany dog, doing ballet barre, horseback riding five days a week and competing in dressage, a sport known as “horse ballet.”

“My hip replacements were the best experience I’ve ever had in medicine,” says Lori. “I rarely even think about them, but having pain-free hips gives me back my joy in life.”
Patient: Patrick Duffy, golfer  
Procedure: Anterior Hip Replacements  
Facility: Hoag Orthopedic Institute, Irvine

Shooting pain down the leg. Too painful to stand more than five minutes. Sitting up to sleep and resting poorly. For Patrick Duffy, severe pain and osteoarthritis that began with the right hip impacted every minute of every day.

The custom home hardware salesman and family man used to golf on the weekends. He walked around job sites, and after work for exercise would power walk the sidewalks near his Mesa Verde home. But at just 63 years of age, Pat’s hip pain began limiting capabilities he’d always taken for granted.

“After gradually worsening for about a year, pain was taking over my life,” recalls Pat. “If I went shopping, after five minutes I was looking for a place to sit down. I could barely stand in church. I was constantly massaging my leg to temporarily eliminate the pain. Golfing was out of the question since I couldn’t walk the course, or even follow through on my swing.”

Pat remembers his brother’s posterior joint replacement a few years ago, and the weeks it took for him to get out of bed. He also recalled his own difficult recoveries from past hernia surgeries. Even though he worried about surgery, something had to be done.

Pat resigned himself to having a total hip replacement, and was pleased to learn about the anterior approach. Prior to his June 2013 hip surgery, Pat prepared by attending HOI’s joint replacement class.

“I learned a lot about what to expect in the hospital, devices for therapy at home, and people advocating for me. They clearly knew their stuff. That eased my anxieties and made my procedure, hospitalization and recovery easier,” recalls Pat.

“My two-night stay at Hoag Orthopedic Institute was a great experience, with the nicest nurses, a clean facility, private room and even good food,” recalls Pat. “My recovery was their primary concern.”

Pat’s recovery at home was easier than he expected. His comparatively small anterior approach incision healed quickly. Within two weeks he was walking around without pain, and without the aid of a walker or cane. “It was a piece of cake,” claims Pat. “And my wife, Sue, had a great deal to do with my recovery in the hospital and at home. She was wonderful.”

Life returned to normal, but within months his left hip began hurting. “This time I knew what to do and didn’t hesitate. I had my left hip replaced,” says Pat. “A year after my first surgery, I chose the same surgeon, the same anesthesiologist, the same therapist and the same hospital, HOI, for the second surgery. Once again, they did wonders for me.”
Lawrence Taylor’s love for the water grew through spearfishing to catch his dinner while serving in Micronesia and the Philippines as a missionary. Although he was only in his 50s, swimming became the only way Larry could exercise without pain from impact.

By the time his ministry brought him to Hawaii, Larry walked with the classic flat-footed, heel-raised limp of someone with hip pain. Church members in California encouraged Larry to seek treatment from medical specialists at Hoag Orthopedic Institute.

After a clear diagnosis of degenerative osteoarthritis in his right hip, Larry researched his options. He had no reservations about proceeding with the minimally invasive anterior approach hip replacement his doctor recommended. To prepare, he attended the hip replacement class at HOI presented by “very helpful nurses and therapists who walked me through the whole process.” He adds “I was one of the younger patients in the class, and the least apprehensive. I had done my homework online and talked to others who’d had a rapid recovery from this surgery. I was so ready to leave behind the pain that I’d had for almost 10 years.”

The first thing Larry remembers after having surgery on July 31, 2013, was being transferred from a gurney to a bed in his private room. “Right away it was amazing to me what a big change I had. They moved me without pain. By the next day, in my last physical therapy session before leaving the hospital, I didn’t need a walker; I could walk with a cane.”

Within a few days, Larry was walking around the Orange neighborhood where he was staying with friends and working with a home health physical therapist. Within a few weeks, his doctor cleared him to fly back to Honolulu. Larry had no limitations, only an admonition not to overstrain his new hip and return in a year for a check-up.

Since returning to Hawaii, Larry has been back in the water, snorkeling, and soaking in nature with walks on the island. “I’m so thankful I was sent to HOI and appreciative of the prayers, support and great care I received,” says Larry. “I’m pain-free. My new hip has made everything I do in life more comfortable and enjoyable.”
For the past 25 years, Rodolfo Franco of Santa Ana has been lifting and moving furniture and appliances up and down stairs for his job with a moving company. But his livelihood was threatened when his boss sent him home, due to a painful torn meniscus that refused to heal.

“We almost lost our house,” recalls the father of five. “I couldn’t do anything. I could barely walk. Rest and medications didn’t help. The pain in my right knee just kept getting worse.”

Rodolfo had always been active, playing soccer throughout his childhood, 20s and 30s, and loved kicking the ball with his children. He recalls having an injury on the field nearly 10 years ago that caused his left knee to start making a popping sound. About five years ago he had to completely quit playing as the pain progressed.

Fortunately, a friend from his soccer team told Rodolfo about AccessOC. The organization brings together volunteer medical specialists who donate their expertise to treat people in need. HOI and its orthopedic surgeons have provided several free surgeries over the past year for uninsured patients referred by AccessOC – including Rodolfo’s. His knee arthroscopy, a minimally invasive procedure, was performed last June by an HOI orthopedic surgeon at Main Street Specialty Surgery Center in Orange.

“The doctor had advised me that my knee wouldn’t heal without surgery. I was a little scared, but everyone at the surgery center was reassuring and kind. They told me not to worry; I was going to be fine. They gave me the confidence I needed,” he recalls.

Rodolfo went home the same day, and only needed crutches for the first week. He closely followed the exercise instructions he was given to rehabilitate his knee so that he could quickly recover.

“I had to return to work,” says Rodolfo. “I was back on the job a month and a half later, but still taking it easy, and after another month I was stronger. Thank God I’m now completely back to normal.”

Rodolfo’s friends have tried to convince him to come back to the soccer team, but his wife is afraid he’ll get hurt again. Instead, he enjoys walking with her, riding bikes with his family and watching his kids play soccer.

“I am so grateful for all the help from Hoag Orthopedic Institute,” shares Rodolfo. “They gave me my life back.”
LEADERSHIP & MEDICAL STAFF

HOAG ORTHOPEDIC INSTITUTE LEADERSHIP

Kanoe Allen, MSN-CNS, RN, PHN, ONC
Vice President and Chief Nursing Officer

Sopida Andronaco, BSN, RN, PHN
Director of Performance Improvement and Clinical Outcomes

Steven L. Barnett, MD
Chief of Staff Elect

Alan H. Beyer, MD
Executive Medical Director

James T. Caillouette, MD
Chief Strategy Officer

Steven H. Gausewitz, MD
Chief of Staff

Andrew P. Gerken, MD
Chair, Department of Surgery

Robert S. Gorab, MD
Chief Medical Officer

Rebecca Israel, BSN, RN, CPHRM, CPHQ
Director of Risk Management, Patient Safety & Regulatory Compliance

Carlos A. Prietto, MD
President

Dereesa Purtell Reid, MBA
Chief Executive Officer

Terry Roth, BSN, RN, CNOR
Executive Director
Perioperative Services

Gabrielle White, RN, CASC
Executive Director
Ambulatory Services & Network Development

ORTHOPEDIC SURGEONS

Adler, Zachary B., MD
Albert, Bruce M., MD
Alexander, Gerald J., MD
Aminian, Arash, MD
Baird, Robert A., MD
Barnett, Lawrence S., MD
Barnett, Steven L., MD
Becker, Steven A., MD
Beyer, Alan H., MD
Caillouette, James T., MD
Carlson, Gregory D., MD
Chi, Ying, MD
Cook, John F., MD
Deckey, Jeffrey E., MD
Dennis, Steven C., MD
Desai, Shaunak S., MD
Dinh, Paul T., MD
Downs, David J., MD
Duggan, Daniel P., DO
Eidt, Herbert C., MD
Farjoodi, Payam, MD
Fischer, Scott P., MD
Fitzpatrick, Michael J., MD
Forman, Scott K., MD
Gausewitz, Steven H., MD
Gazzaniga, David S., MD
Gerken, Andrew P., MD
Gibson, Timothy W., MD
Gillman, Michael J., MD
Gorab, Robert S., MD
Gordon, Michael L., MD
Graham, Scott M., MD
Greenbaum, Bradley S., MD
Grumet, Robert C., MD
Halikis, Mark N., MD
Ipo, Tze C., MD
Johnson, Bryce A., MD
Kadakia, Nimish R., MD
Kang, Steve, MD
Kim, David H., MD
Klernek, Joseph S., MD
Kramer III, Warren G., MD
Labovitch, Ryan S., MD
Lau, Diana G., MD
Le, Vu H., MD
Lee, Jason H., MD
Lee, Richard S., MD
Lieber, Corey M., MD
Limpisvasti, Orr, MD
Mayo III, Joseph G., MD
Mikulak, Stephen A., MD
Mir, Hamid R., MD
Mora, Steve A., MD
Mudiyam, Ram, MD
Nassif, Nader A., MD
Newman, Mark A., MD
Park, Samuel W., MD
Patel, Jay J., MD
Peng, Jiun-Rong, MD
Peters, Dominic J., MD
Peters, Todd W., MD
Petrie, Russell S., MD
Prietto, Carlos A., MD
Prietto, Miguel P., MD
Robicheaux, Grant W., MD
Rose, Nicholas E., MD
Rowshan, Kasra, MD
Rubin, Benjamin D., MD
Rubinstein, Michael P., MD
Shepard, Michael F., MD
Shon, Floyd G., MD
Smith, David C., MD
Smith, Jeremy S., MD
Tapadiya, Dilip H., MD
Tischler, Alexander H., MD
Vyas, Shail M., MD
Weinstein, Michael P., MD
White, Jon I., MD
Wilkens, Kenneth J., MD
Yarur, Nicholas C., MD
Yee, Lincoln S., MD

On Medical Staff as of January 2014. For a complete listing of HOI’s entire medical staff, visit www.orthopedichospital.com/physicians.
DISCLOSURE OF OWNERSHIP

Hoag Orthopedic Institute meets the definition of a “physician-owned hospital” under 42 CFR 489.3. The hospital is owned in part by Hoag Memorial Hospital Presbyterian, and in part by the following physicians:

Barnett, Steven L., MD
Beyer, Alan H., MD
Caillouette, James T., MD
Charlu, Balaji, MD
Cook, Jr., John F., MD
Danto, Michael, MD
Deckey, Jeffrey E., MD
Dennis, Steven C., MD
Desai, Shaunak, MD
Dinh, Paul, MD
Fischer, Scott P., MD
Forman, Scott K., MD
Gausewitz, Steven H., MD
Gerken, Andrew P., MD
Gorab, Robert S., MD
Gordon, Michael L., MD
Hales, Klane, MD
Halikis, Mark N., MD
Ip, Tze C., MD
Lee, Richard, MD
Mikulak, Stephen A., MD
Mudiyam, Ram, MD
Parson, Narendra, MD
Peng, Jiun-Rong, MD
Petrie, Russell S., MD
Prietto, Carlos A., MD
Prietto, Miguel P., MD
Rose, Nicholas E., MD
Rubin, Benjamin D., MD
Safman, Kimberly, MD
Shepard, Michael F., MD
Smith, Leighton, MD
Tischler, Alexander H., MD
Weinstein, Michael P., MD
CONTACT INFORMATION & RESOURCES

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Main Street Specialty Surgery Center
280 South Main Street, Suite 100
Orange, CA 92868
714-704-1900
www.msssc.com

Orthopedic Surgery Center of Orange County
22 Corporate Plaza, Suite 150
Newport Beach, CA 92660
949-515-0708
www.oscoc.com

LINKS

Physician Referral
855-999-HOI1 (4641)
www.orthopedichospital.com/physicians

Patient Feedback
www.orthopedichospital.com/search/
Patient+Feedback

Travel Program
www.orthopedichospital.com/travelprogram
Gabrielle White, RN, CASC
Executive Director of Ambulatory Services & Network Development
949-515-7669
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