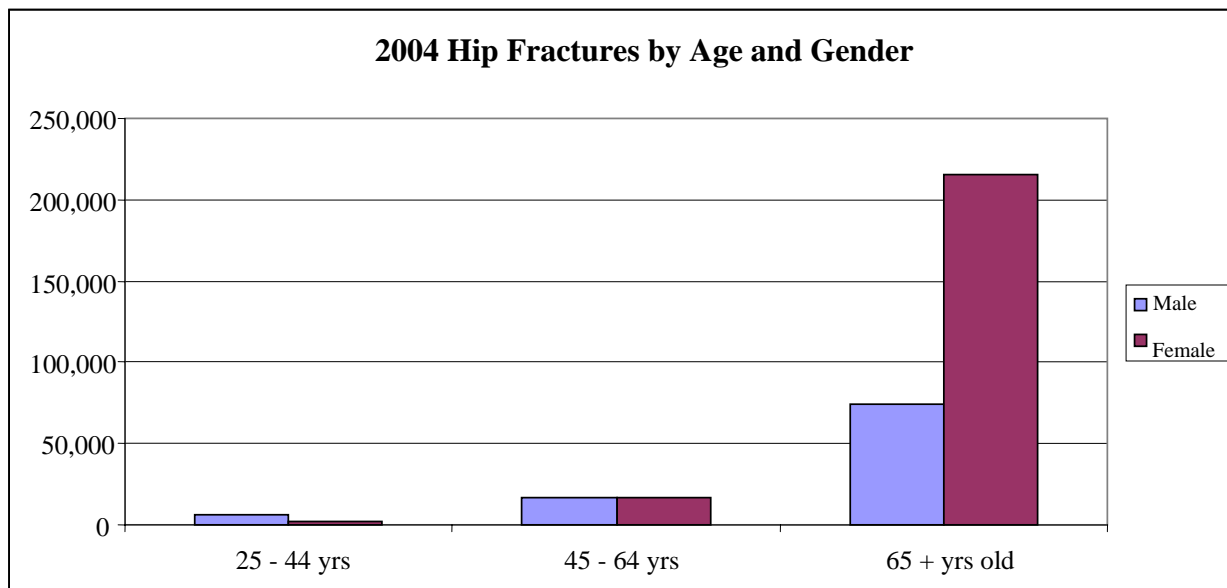


**A. Treatment of Intertrochanteric/Subtrochanteric Fractures and Subcapital Fractures of the Hip**

In 2004, there were more than 159 million physician visits for musculoskeletal conditions in the United States.<sup>1</sup> Musculoskeletal conditions are among the most prevalent reasons for seeking medical treatment and their financial and social impact is widespread. Of these conditions, hip fractures have an enormous impact on the health of the U.S. population, particularly among those aged 65 and older.<sup>2</sup> In addition to the pain and loss of mobility resulting from hip fractures, the mortality rate for patients one year after a hip fracture is approximately 15% higher than that for nonaffected people of similar age and gender.<sup>3</sup> At one year post surgery hip fracture is associated with a 50% loss of function and only 30% of patients regain function.<sup>4</sup>

The incidence of hip fractures is age- and gender-specific. The National Inpatient Sample data shows that from birth to age 44 males account for three times the hip fractures as females in the same age group.<sup>2</sup> Between the ages of 45 and 64 the number of hip fractures in males and females are nearly equal with females recording slightly more occurrences in three of the five years from 2000-2004. The increase in the incidence of hip fracture in females as compared to males in the 65 years and older group is marked, as illustrated in Figure 1 below.

**Figure 1**



The financial impact of hip fractures has grown steadily in recent years and, given current projections, will continue to increase in the foreseeable future. From 2000

to 2004 the annual charges for hip fracture hospitalization per patient increased from \$7.2 billion to \$11.3 billion.<sup>2</sup> Length of stay, rehabilitation needs, and complications contribute to these charges and have been the focus of most efforts to reduce the costs associated with treatment.<sup>3</sup>

Risk factors for hip fracture are well-defined across the age groups. In patients less than 44 years of age most hip fractures are attributable to trauma. For patients aged 45 and older most fractures are the result of osteoporosis.<sup>3</sup> In addition to the increased risk related to age other major risk factors include being female, falling, low bone mass, and previous low trauma fractures.<sup>4</sup> This information enables surgeons to educate patients and provide preventative treatment and evaluations, such as DEXA scans and bisphosphonate therapy. However, once the fracture has occurred data is needed to evaluate the intervention options based on the type of fracture, patient characteristics, and expected outcome.

## **B. Treatment of Intertrochanteric/Subtrochanteric Fractures and Subcapital Fractures of the Hip**

1. What is the correlation between type of fracture and post-treatment outcomes?
  - a. Intertrochanteric/subtrochanteric
  - b. Subcapital
2. What is the relationship between patient variables and type of fracture?
  - a. Intertrochanteric/subtrochanteric
  - b. Subcapital
3. What is the relationship between implant variables and patient post-treatment outcomes?
4. What is the correlation between intervention and patient post-treatment outcomes?

## **C. Plans for rapid translation of the evidence reports and technology assessments into clinical guidelines, performance measures, educational programs or other strategies for strengthening the quality of health care services, or plans to inform development of reimbursement or coverage policies.**

To improve the quality of care and reduce disparities, many organizations, including the AAOS, have turned to the development of evidence-based clinical practice guidelines. Indeed, AAOS has been actively involved in the development of clinical practice guidelines since the mid-1990s, and that commitment to quality, evidence-based guideline development continues to this day.

In October 2004, the AAOS formally adopted the position that evidence-based practice guidelines should be developed and used in the care of orthopaedic patients. In 2006, AAOS embarked upon a comprehensive multiyear plan to develop evidence-

based clinical practice guidelines according to a rigorous, transparent evidence-based methodology. *AAOS greatly appreciates the fact that AHRQ has already recognized our ongoing work in evidence-based clinical practice guidelines by providing us with a systematic evidence review on Knee Osteoarthritis in 2006-07.*

Thus far, AAOS has already completed two new guidelines according to our new rigorous development methodology. These two guidelines cover the topics of **Carpal Tunnel Syndrome Diagnosis** and **Pulmonary Embolism Prophylaxis in Orthopaedic Surgery**. These two guidelines will be released to the public in Summer 2007. The AAOS is continuing its aggressive plan to develop and publish evidence-based clinical practice guidelines based on rigorous systematic evidence reviews, with the goal of completing additional guidelines in 2007 on **Knee Osteoarthritis** (based upon the systematic evidence review conducted by AHRQ in 2006-2007), **Acute Low Back Pain**, and **Carpal Tunnel Syndrome Treatment**. *Should AHRQ elect to select one or more of our proposed topics for systematic review, the resulting evidence would serve as a basis for a portion of the AAOS guidelines to be completed in 2008.*

AAOS plans to continue its aggressive initiative to develop and publish evidence-based clinical practice guidelines on an ongoing basis over the next several years. The core reasons behind this initiative are threefold:

- 1) Current disparities in the quality of medical care in the United States, as documented by the Institute of Medicine's book *Crossing the Quality Chasm* and other reports;
- 2) The current shift towards a pay-for-performance model for medical reimbursement; and
- 3) The demands and expectations of the AAOS member physicians who recognize the importance of this initiative.

### **Impact of Evidence-Based Guidelines on Orthopaedic Practice**

The foundation for the best practice of medicine evolves from the published, peer-reviewed evidence. Yet the sheer volume of this information presents a significant barrier to the practicing surgeon. A recently published article indicated that 26,945 research papers were published between 1991 and 2000 in the top 7 peer-reviewed medical journals alone. Obviously, no one individual can keep pace with all that is being published. Evidence-based practice guidelines serve to assist the practicing orthopaedic surgeon in their quest to improve patient care by consolidating the relevant evidence, and indicating the strength of the recommendations for treatment options. AAOS would use any systematic evidence review conducted by the AHRQ's Evidence-Based Practice Centers to support and augment our ongoing efforts to develop useful evidence-based guidelines and performance measures for orthopaedics. Because AAOS' capacity for conducting systematic evidence reviews of its own is limited, AHRQ's provision of systematic reviews beyond our own

capabilities will allow us to develop more evidence-based guidelines and performance measures (and on a more rapid timeline) than we could do alone.

Following is a brief summary of the AAOS' current work plan for developing and supporting evidence-based practice guidelines and performance measures, in which AHRQ's services could serve as a means for program expansion and increased efficiency.

### **Guideline and Performance Measure Development via the AAOS Evidence Analysis Workgroups**

Guideline and performance measure development at the AAOS is conducted via subspecialty-focused evidence analysis workgroups of 5-8 volunteer physicians each (supported by relevant AAOS staff), who provide a balanced combination of knowledge of systematic evidence-based analysis and (where needed) expert clinical opinion. All guideline workgroup members are required to complete a minimum of 8 hours of CME training programs in evidence-based medicine and evidence-based analysis, courses which AAOS provides to its members free of charge.

#### ***Guideline Development Process***

The volunteer physician workgroup works with AAOS staff and/or contracted vendors to form a list of Key Questions from which to frame literature searches on the chosen guideline topic. AAOS staff and/or contracted vendors then conduct systematic evidence reviews (or in lieu of AAOS staff/contractors, AHRQ will conduct systematic evidence reviews for the above-proposed topics.) Once the systematic review is complete, the volunteer workgroup and appropriate staff review the literature/evidence tables and make clinical recommendations based on the literature's findings. The recommendations are then compiled and formatted into the AAOS' standardized, evidence-based, and transparent Guideline Template. The draft guideline is then circulated to the AAOS Guidelines Oversight Committee and AAOS Evidence-Based Practice Committee for review and comment from a methodological perspective. Once the final draft is complete, it is sent for review/endorsement by the AAOS Board of Directors, then released to the public.

The AAOS Guidelines Oversight Committee (a committee of 15 volunteer orthopaedists with expertise in policymaking, evidence-based practice, and physician reimbursement), in partnership with the AAOS Evidence-Based Practice Committee (a committee of 10 volunteer orthopaedists with expertise in evidence-based medicine and analysis) provides direct oversight to the various anatomical evidence analysis workgroups and the overall guideline development process. AAOS plans to support evidence analysis workgroups on 12-18 topics over the next 3-5 years. Currently, AAOS guideline workgroups are working on the following topics according the above-described process:

- Knee Osteoarthritis (using AHRQ's 2006-07 systematic review)
- Acute Low Back Pain
- Carpal Tunnel Syndrome Diagnosis

#### ***How AHRQ Can Help***

AHRQ's provision of additional systematic evidence reviews on the topics of rotator cuff repair and hip fracture treatment will allow the AAOS to develop evidence-based guideline/performance measure sets far more rapidly (i.e., in 3-6 months) and at a much-reduced cost than via our regular internal process. Due to the high burdens of disease and cost for these conditions, the AHRQ's assistance is necessary to assist the AAOS in serving the needs of orthopaedists and their patients. The exigency for rapid turnarounds in guideline development is an issue AAOS and other medical specialty societies must address, as efforts by industry, insurance companies and the Centers for Medicare and Medicaid Services (CMS) to develop performance measures continues to grow. Patients, practitioners, and healthcare in general will benefit from a cooperative approach to the development of measures, yielding meaningful outcomes. In order for physicians and their professional organizations to participate, programs that assist with the production of evidence reviews are imperative.

#### **D. Plans for use and/or dissemination of these derivative products, e.g., to organization memberships, if appropriate.**

The AAOS has been heavily involved in guidelines production in the past through the efforts of its physician committees, as well as a cadre of physicians who have been trained by the AAOS in evidence analysis. Previously, these groups have developed treatment guidelines that were later published on the AAOS web site and in the National Guidelines Clearinghouse (NGC) for use by our members, insurance companies, government entities, and the public. The AAOS will continue to maximize these and other emerging outlets for dissemination of guidelines and performance measure products, including the National Quality Forum's endorsement and dissemination process for evidence-based performance measures. AAOS also occupies a seat on the Executive Committee for the American Medical Association's Physician Consortium for Performance Improvement, a multi-specialty organization dedicated to developing physician-focused performance measures; the AAOS has been active in bringing its completed guidelines to the Consortium for use in performance-measure development.

The AAOS is also developing plans to use its evidence-based guideline/performance measure products to create utilization review guidelines for sale to private health insurers, which will facilitate the wider dissemination of evidence-based orthopaedic practice while providing a means for the AAOS to defray some of the costs of developing guidelines.

#### **E. Process by which the nominating organization will measure the use of these**

**products and impact of such use.**

The AAOS will monitor and measure the use and impact of its evidence-based analysis guidelines and performance measures as follows:

- 1) The **National Guidelines Clearinghouse** and the **National Quality Measures Clearinghouse** provide annual viewing and download statistics to the publishers of all the guidelines/performance measures registered with their sites. The AAOS monitors these statistics closely as one means of measuring the usage impact of its guidelines products.
- 2) The **National Quality Forum (NQF)**'s performance measure endorsement process provides a means for vetting evidence-based performance measures by a large, national group of healthcare providers, payers, researchers, and consumers. NQF's endorsement of a performance measure usually results in its widespread adoption and implementation by both public and private payers, and subsequently, healthcare providers.
- 3) In addition to the above national programs in which the AAOS participates, the AAOS conducts regular surveys of its members on various aspects of their orthopaedic practice. The AAOS therefore has the capacity to survey its members on the usage impact the AAOS' published guidelines and performance measures have on our members' orthopaedic practices.

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<sup>1</sup> National Ambulatory Medical Care Survey 1999-2004. Data obtained from: United States Department of Health and Human Services; the Centers for Disease Control and Prevention; National Center for Health Statistics.

<sup>2</sup> National Inpatient Sample, 2000-2004. Data extracted and analyzed by the AAOS Department of Research and Scientific Affairs.

<sup>3</sup> Haentjens P, Autier P, Barette M, and Boonen S. The economic cost of hip fractures among elderly women: a one-year, prospective, observational cohort study with matched-pair analysis. *J Bone Joint Surg Am.* 2001;83:493-500.

<sup>4</sup> Woolf AD, Pfleger B. Burden of major musculoskeletal conditions. *Bulletin of the World Health Organization.* 2003;81(9):646-656.