### Joint Event

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## **Robotic guided total hip arthroplasty**

**P**rimary total hip arthroplasty (THA) is a common procedure, with 332,000 procedures performed in 2010, in the United States alone. Increases for THA in younger patients (< 60 years), as a consequence of preexisting hip disorders, account for almost 40% of THA procedures completed in the United States. This produces a challenge, as it has been shown that younger age at the time of the primary THA corresponds to increased risk of revision THA. Numerous studies report primary THAs in patients younger than 30 years with global revision rates ranging from 4% to 33%. These reported rates are much higher than those reported for older patients' range 7%-15% with a longer follow up. The conventional technique of using manually manipulated instrumentation is the most widely used for reaming the acetabulum and broaching the femur in THA. Recently, computerized guidance systems, including image-assisted navigation, imageless navigation and robotic-assisted computer navigation, have been introduced for use in THA. The goal of this technology is to improve the precision and reproducibility of acetabular reaming, which is expected to lead to improved implant longevity and decreased complications related to loosening, intra-operative fractures, and acetabular cup protrusion.

#### **Recent Publications:**

- 1. Inpatient Surgery. 2014. Center for Disease Control and Prevention. Available at http://www.cdc.gov/nchs/fastats/ inpatient-surgery.htm. Accessed on February 13, 2015.
- 2. Kurtz S, Ong K, Lau E, Mowat F, Halpern M (2007) Projections of Primary and Revision Hip and Knee Arthroplasty in the United States from 2005 to 2030. Journal of Bone and Joint Surgery American Volume 8(4):780-5.
- Fleischman J A (2005) Medical Expenditure Panel Survey. Rockville, MD: Agency for Healthcare Research and Quality. Available at: http://meps.ahrq.gov/mepsweb/data\_files/publications/mr15/mr15.shtml. Accessed on February 13, 2015.
- 4. Gandhi R, Tsvetkov D, Dhottar H, Davey J R and Mahomed N N (2010) Quantifying the pain experience in hip and knee osteoarthritis. Pain Research and Management: The Journal of The Canadian Pain Society = Journal de la Societe Canadienne pour le Traitement de la Douleur. 15(4):224-228.
- 5. Adelani M A, Crook K, Barrack R L, Maloney W J, Clohisy J C (2014) What is the Prognosis of Revision Total Hip Arthroplasty in Patients 55 Years and Younger? Clinical Orthopaedics and Related Research 472(5):1518–1525.

#### Biography

Carlos Suarez-Ahedo is an MD who graduated from La Salle University. He finished his training in Orthopedics and Traumatology at the Spanish Hospital in Mexico City. He later finished the specialty of Articular Surgery and Adult Joint Reconstruction at the National Rehabilitation Institute of Mexico and also a Fellowship in Chicago, USA in Joint Preservation Surgery. He is also an Attending Surgeon in the Department of Adult Joint Reconstruction at the National Rehabilitation Institute of Mexico. He has been actively participating as author and coauthor in several scientific publications in recognized international journals and has been invited to present research papers in forums of great importance in the field of World Orthopedics.

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