**TITLE:** Adolescent Total Hip Arthroplasty Registry: A retrospective review with short to medium term follow up

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**INTRODUCTION:**

For adolescent patients with end stage destructive hip disease, the historic treatment was hip arthrodesis. Hip arthrodesis to can lead to less than optimal outcomes as compensatory knee and lumbar spine motion is essential for ambulation. Several studies report of pain in adjacent joints in the long term; the most frequent being lower back pain based on degenerative changes reported between 60% and 100% of case as well as high levels of ipsilateral knee pain. Advancement in total hip arthroplasty longevity have made this a surgical option for adolescent patient populations.

**METHODS:**

Under a quality improvement project we will compile a de-identified adolescent total hip arthroplasty patient registry. We performed a retrospective chart review from 1999-2019 of all cases of adolescents undergoing total hip arthroplasty with a primary outcome of length to primary revision of the operative hip for any reason. Survivorship rates will be calculated. Harris hip scores will be calculated based on the chart review as well as visual analog scales for pain. Subgroup analysis, using the collected demographic data, will be conducted using Chi-squared, student T-test and fisher exact test using SPSS software program.

**RESULTS:**

We anticipate THA in the adolescent population provides improvement in function while avoiding many complications associated with hip arthrodesis. Also, we anticipate that the implant survivorship rates to be of acceptable level, though less than adult population published survivorships.

**DISCUSSION/CONCLUSION:**

Improvements in implant design make total hip arthroplasty a viable option for adolescents with end stage destructive hip disease with long lasting pain relief and improvement in function with acceptable implant survivorship.