Abstract Title: Quantifying physical and psychological outcomes after periprosthetic femoral fracture in older adults

Background: Total hip arthroplasty (THA) and total knee arthroplasty (TKA) are common and effective treatments for osteoarthritis. Falls risk is increased after these surgeries due to age, proprioceptive changes and leg weakness. One devastating consequence of falling after these surgeries, both functionally and psychologically, is a peri-prosthetic femoral fracture (PFF). Existing research on PFF has focused on surgical management and not the functional or psychological impacts to the person after this injury.

Hypotheses/Objectives: The study objectives are: 1) To evaluate the subjective and objective functional and psychological outcomes after sustaining a PFF, and 2) to estimate the prevalence of falls since the PFF and future falls risk.

Proposed Methods: Participants will be recruited through the Orthopedic Outpatient Clinic at London Health Sciences Center. A self-report questionnaire will measure subjective functional ability (e.g., walking, driving) and psychological (e.g., depression, social isolation) outcomes. Future falls risk will be measured with the Falls Risk in Older People in a Community Setting (FROP-Com) scale and fear of falling by the Activities-specific Balance Confidence (ABC) scale. Participants will perform physical performance tests: 30-Second Sit to Stand Test and Step Test for measuring lower limb strength and balance, respectively. Data will be summarized in means and standard deviations or proportions and percentages as appropriate.

Future Implications: There is limited knowledge about the functional and psychological outcomes after PFF post-THA/TKA. Understanding the effects that PFF can have on older adults is critical to health providers and patients in order to set appropriate rehabilitation goals to improve quality of life.