

Research Project Details	
Title	Epidemiology of perilunate injuries in Alberta
Investigator(s)	Dr. Matthew Curran, University of Alberta
Funding Period	2023-2024
Budget	\$39,140.00
Issue/Rationale	<p>Perilunate fractures and dislocations are among the most devastating of upper extremity injuries and usually result from high energy trauma. Perilunate fractures and dislocations can occur as isolated dislocations (PLD) or as a perilunate fracture dislocation (PLFD) often with accompanying acute nerve compression. Nearly all perilunate spectrum injuries require surgical intervention. Prompt recognition and treatment of these injuries is critical for a successful outcome, but delayed diagnosis occurs in approximately 25% of cases. This can lead to complications which include median nerve dysfunction, carpal instability, and posttraumatic arthritis. Surprisingly little is known about these complex and devastating injuries. The epidemiology of these injuries is unknown. The province of Alberta is uniquely structured to comprehensively study the epidemiology of PLD/PLFD. The overwhelming majority of cases of PLD/PFLD are operative, and referrals are funneled to the two major urban sites of Edmonton and Calgary. Through collaboration between the University of Alberta and the University of Calgary, we can identify and capture all PLD/PLFD occurring in the province over a given time period.</p>
Objective(s)	<p>Main objective: Capture and create a comprehensive dataset of perilunate injures in Alberta from 2010 – 2019 and publish the incidence, epidemiology, classification, and pre-hospital care of perilunate fractures and dislocations in Alberta.</p> <p>Specific Aim 1: Determine the incidence of perilunate dislocations in Alberta. Subgroup analysis will determine the number of injuries that occur in the workplace, recreationally, and via motor vehicle crashes.</p> <p>Specific Aim 2: Determine the impact of socioeconomic status on the incidence of perilunate dislocations.</p> <p>Specific Aim 3: Identify barriers associated with delays to accessing definitive management. We hypothesize that delay in treatment impacts the outcome of fixation of a PLD. This may be more prominent in under-represented and marginalized groups.</p> <p>Specific Aim 4: Report on long-term outcomes, including return to work and barriers to returning to pre-injury occupation</p>
Anticipated Results/ Impact	The findings of this study will allow us to make recommendations that guide the management of PLD/PLFD to improve outcomes for patients. This should improve the surgical care of patients resulting in less pain, less requirement for revision surgery and improved return to work. It will also be used to improve healthcare flow and resource allocation, thus improving the healthcare system.
Keywords	Perilunate, wrist injury, healthcare planning, wrist surgery, resource efficiency, treatment barriers, socioeconomic status