



## Poster # 36

**Title of poster:** Barriers to the use of Femoral Nerve Blocks to manage Hip Fracture Pain among Frail Elders

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### Abstract

**Background:** Hip fractures are a common source of pain and related morbidity among the frail elderly. One technique that has been shown to adequately manage pain in this population is the femoral nerve block. However, it is not currently employed routinely in Alberta emergency departments.

**Objective:** The first objective was to systematically review the recent literature around the use of femoral nerve blocks to manage acute pain among older adults with a hip fracture. The second objective was to survey physicians about the potential barriers to routinely performing femoral nerve blocks in the emergency department.

**Materials and Methods:** Searches of Medline, EMBASE and the Cochrane Trials database were conducted between 2010 and 2014 to identify randomized control trials examining the use of femoral nerve blocks in the ED to manage acute hip fracture pain among older adults (65 years of age and greater). The reference list of a previous systematic review published in 2011 was also searched. The results of the systematic review were used to inform the development of the barrier survey. The questions were structured using Michie's twelve theoretical behaviour domains and the Behaviour Change Wheel. The survey was distributed to physician members of the Alberta Emergency and Bone & Joint Strategic Clinical Networks.

**Results:** Seven randomized control trials were included in the review. Four studies employed a single femoral block, while three employed continuous (catheter placed) femoral blocks. All of the studies reported statistically significant reductions in pain. All but one study reported that patients treated with femoral nerve blocks consumed significantly less rescue analgesia. Finally, there were no significant adverse effects reported with the femoral block procedure and multiple studies found a decreased risk of respiratory and cardiac events.

Surveys are still being collected and evaluated. The results of the barrier survey will be mapped against the Behaviour Change Wheel to help determine the most effective knowledge translation strategies to employ to increase the use of femoral nerve blocks in Alberta emergency departments.

**Conclusions:** Femoral nerve blocks appear to have benefits both in terms of decreasing pain and limiting the amount of systemic opioids administered to frail older adults experiencing a hip

fracture. The results of this review and the barriers survey will help inform the development of knowledge translation strategies to increase the routine use of femoral nerve blocks.

