# Management of Compression Fractures.

Olivier Payen
*Muhlenberg College*



Published In/Presented At
Payen, O., (2018, July, 31) *Management of Compression Fractures*. Poster presented at: LVHN Research Scholar Program Poster Session, Lehigh Valley Health Network, Allentown, PA.

# Management of Compression Fractures

Research Scholar: Olivier Payen
Mentors: Rovinder S. Sandhu MD, Christine Campbell RN
**Lehigh Valley Health Network, Allentown, Pennsylvania**

## INTRODUCTION

- Compression Fractures are collapses in the vertebra that affect around 750,000 people annually
- Knowledge of spinal fractures has evolved to encourage the use of conservative treatment
- Neurosurgical intervention is unnecessary as most cases don't require immediate surgical intervention
- A change to primarily conservative treatment would be saving time and money for patients, as well as the hospital

## METHODS

- Retrospective analysis of 228 trauma patients presented to LVHN-CC with compression fractures
  - For inclusion, fracture must have been isolated spinal fractures. Patient must have survived through stay
- All of the information was collected from EPIC, EHMR, and Trauma Registry
- Data collected includes:
  - ICU LOS, Hospital LOS, Mortality?
  - Gender, Age
  - Associated Injuries?, Spine Service Consulted?, Mechanism of Injury
  - FIM Score, Neurologic Symptoms, Management
  - Fracture Level, Number of Fractures

## OUTCOMES

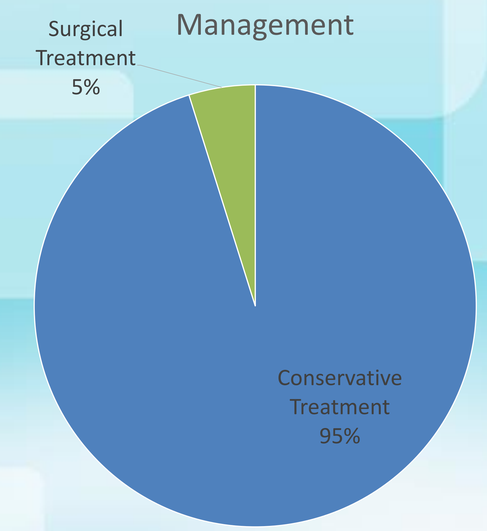


Fig. 1 . Pie chart representing distribution between two kinds of injury

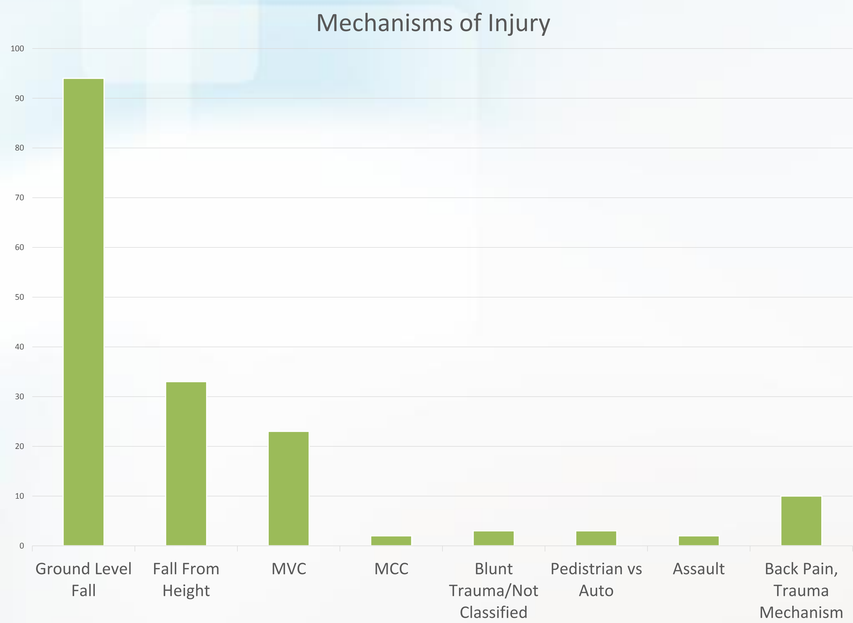


Fig. 2. Distribution of MOI of isolated spinal fractures in 2015

## RESULTS

| | Surgical Treatment | Conservative Treatment |
|---|---|---|
| Average Age | 42 Years Old | 67.02 – 67 Years Old |
| Mechanism of Injury Totals | Ground Level Fall – 1<br>Fall From Height – 2<br>MVC – 4<br>Back Pain/MOI Unknown – 1 | Ground Level Fall – 89<br>Fall From Height – 31<br>MVC – 19<br>MCC – 2<br>Blunt Trauma – 3<br>Ped. vs Auto – 2<br>Assault – 2<br>Back Pain/MOI Unknown – 9 |
| • Avg. Hospital Length of Stay<br>• Avg. ICU Length of Stay | • 6.5<br>• 1.375 Days | • 5.03 Days<br>• 0.39 Days |
| Functional Independence Measure Score Averages | Feeding – 4<br>Locomotion – 2.67<br>Expression – 4<br>Transfer – 3.167<br>Social – 4 | Feeding – 3.87<br>Locomotion – 3.048<br>Expression – 3.94<br>Transfer – 3.104<br>Social – 3.912 |

## CONCLUSIONS

- Although the data hasn't been yet tested for significance, you can start to infer based on what has been collected so far. Of the 165 out of 228 patients that met the inclusion criteria, 95 % of patients were treated conservatively with no treatment or a type of brace/corset. This supports the idea that maybe a physical therapy consult is a more appropriate consult than a spine service, as spine service would say the same thing regardless. The patients who were treated surgically also stay in the hospital and ICU longer by about 2 and 3 days respectively. The most common injuries were ground level falls.





Lehigh Valley Health Network