Hospital transporters have a physically demanding job, involving lifting, pushing, pulling & turning of patients. Sprains/strains account for the largest category of injuries (~45%) in hospital transporters. Obese workers are more likely to sustain musculoskeletal (MSK) injuries compared to non-obese workers. MSK injuries may result in lost work days and increased workers’ compensation costs. Anecdotal evidence suggests that manual stretchers disproportionately contribute to MSK injuries. A back injury prevention program would be beneficial to hospital transporters.

Jobs involving lifting, pushing, pulling & turning of patients result in musculoskeletal (MSK) injuries. Motorized stretchers implementation began in 2013. A study of hospital transporters evaluated the impact of the introduction of motorized stretchers on injury occurrence. Results showed that non-obese transporters were more likely to sustain injuries than non-obese transporters. Obese workers had higher costs compared to non-obese workers. Total claim costs remained $10,272 for non-obese workers and $1,977 for obese workers. Small sample size, low numbers of transporters in the overweight sample, and grouping normal and overweight transporters together may have influenced the results.

Methods
- Study Design: Retrospective chart review
- Study Population: Hospital transporters who sustained sprain/strains who filed workers’ compensation claims
- Study Duration: January 2013 - December 2016
- Data Collection:
  - Data extracted were age, sex, BMI, job category, body part injured, mechanism and type of injury, associated WC costs, and lost & restricted work days
  - # of stretcher related MSK injuries were recorded each year
  - Motorized stretchers implementation began in 2013 with incremental increases in total number each year
- Statistical/Data Analysis:
  - Wilcoxon rank-sum tests to compare normal/overweight vs obese with regard to lost & restricted work days and WC costs
  - 2-way ANCOVA using log10(WC costs) adjusting for sex & age
- 96 injuries occurred while transporting/transferring patients. Sprains & strains contributed to 68 (71%) injuries in 56 workers. 6 workers had 2 injuries & 3 workers had 3 injuries. Of 68 injuries, 51 (75%) injuries were in transport workers. Of 56 workers, 29 (52%) female, mean age 35.9 ± 10.3 years. Two transporter categories: patient (44.6%); telemetry (30.4%). 49 workers had BMI recorded.
  - Normal 20 (40.8%)
  - Overweight 9 (18.4%)
  - Obese 20 (40.8%)
  - Obese compared to non-obese workers were more likely to be older (39.7 vs 33.6, p=.04) and male (60.0% vs 37.9%, p=0.15)
  - Of 68 injuries: transport methods were via
    - Stretchers 33 (48.5%)
    - Patient transfers 27 (39.7%)

Results
- Obese workers had increased claims costs compared to non-obese workers (median $2905 vs $537, p=.006).
- Total claim costs remained significantly higher in obese workers ($1,977 vs $133, p=.002) after adjusting for age and sex.

Introduction

Objective

To determine the effect of BMI on WC outcomes in hospital transporters employed at a large university hospital.

To evaluate the impact of the introduction of motorized stretchers on injury occurrence.

Methods

Study Design: Retrospective chart review
Study Population: Hospital transporters who sustained sprain/strains who filed workers’ compensation claims
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Data Collection:
- Data extracted were age, sex, BMI, job category, body part injured, mechanism and type of injury, associated WC costs, and lost & restricted work days
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Statistical/Data Analysis:
- Wilcoxon rank-sum tests to compare normal/overweight vs obese with regard to lost & restricted work days and WC costs
- 2-way ANCOVA using log10(WC costs) adjusting for sex & age

Results
- Obese transporters compared to non-obese workers:
  - Same restricted workdays (median 0 vs 0 days, p=.07)
  - Increased lost days (median 18 vs 7.5 days, p=.07)

<table>
<thead>
<tr>
<th>Year</th>
<th>Non Obese Lost Work Days</th>
<th>Obese Lost Work Days</th>
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<tr>
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<td>5</td>
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</tr>
<tr>
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<td>5</td>
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</table>

Limitations
- Small sample size
- Low numbers of transporters in the overweight sample resulted in grouping normal and overweight transporters together
- No BMI data available on 7 (12.5%) employees
- Misclassification potential regarding who was included as a transporter

Conclusions
- Stretchers use by patient transporters attributed to the largest number of injuries
- Patient transport workers who are obese had higher workers compensation costs and more restricted work days
- Back injuries were the most prevalent
- Back injury prevention programs would be beneficial to hospital systems in addition to lift systems that may already be in place
- Purchasing motorized stretchers by hospitals is likely to reduce injury occurrences in hospital transporters

This research was supported in part by training grants from the National Institute of Occupational Safety and Health - grant number: T32OH008289, and the Health Resources and Services Administration - grant number: D33HP25770-01-00. The information and views set out in this study are those of the authors and do not necessarily reflect the views of the funding agencies.