Introduction

- Workplace falls are common source of worker injuries
- For most employers, slips & falls most common, or second most common reason for workers’ compensation (WC) claims
- Falls, slips, and trips were the second most common cause of injury that resulted in lost work days (2012-16)
- Prevalence of these injuries expected to increase as baby boom generation approaches retirement ~ 2020
- Number of falls resulting in injury projected to be 17,293,000 in 2020 (1)
- A self-insured school district on the West Coast monitored fall data using gross number of employee falls, grouped by date and occupation
- Total number of employees (denominator) not utilized in this analysis

Objective

- To determine the relative risk of falls for each occupation using denominator data

Methods

- Study Design
  - Descriptive quantitative analysis.
- Study Population
  - 60 occupations involved in the 1,095 falls that occurred from 2012-2016
  - 5 occupations that were involved in the most falls were chosen for further analysis
    - 22 of the falls did not specify the occupation
- Procedures
  - Reported falls for each occupation was divided by average number employees for 2012-2016
  - Derived percentage of each occupation involved in a fall
  - Occupation with lowest percentage of falls used to determine RR of falls in other occupations.
- Statistical / Data Analysis
  - Relative Risk
  - Fischer’s Exact Test

Results

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Reported Falls (RF)</th>
<th>Average Number of Employees / Occupation</th>
<th>Percentage of Occupations Involved in Fall</th>
<th>Rel. Risk %</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher, Regular</td>
<td>250</td>
<td>4,358</td>
<td>5.74%</td>
<td>~0.0001</td>
<td></td>
</tr>
<tr>
<td>Custodian</td>
<td>122</td>
<td>1,127</td>
<td>4.57%</td>
<td>~0.0001</td>
<td></td>
</tr>
<tr>
<td>Bus Driver</td>
<td>66</td>
<td>1,105</td>
<td>5.92%</td>
<td>~0.0001</td>
<td></td>
</tr>
<tr>
<td>Teacher, Asst.</td>
<td>81</td>
<td>1,121</td>
<td>7.05%</td>
<td>~0.0001</td>
<td></td>
</tr>
<tr>
<td>Office Manager / Supervisor</td>
<td>54</td>
<td>1,125</td>
<td>4.72%</td>
<td></td>
<td>~0.0001</td>
</tr>
</tbody>
</table>

Five occupations accounted for > 50% of falls
- Teachers, custodians, bus drivers, special education teaching assistants, office managers / Supervisors
- Teachers had:
  - Most reported falls
  - Highest percent of total fall injuries
  - Occupation with lowest percentage of individuals involved in a fall
- Lowest RR of a fall
- Office Managers / Supervisors had:
  - Fewest reported falls
  - Lowest percent of total fall injuries.
- Occupation with the highest percentage of individuals involved in a fall
- Highest RR of a fall

Limitations

- The use of data regarding the number of employees at each school site would show the relative risk of being involved in a fall based on location.
- An employee may have sustained multiple falls, but we are unable to ascertain this with our current data.
  - This data may have explained a larger number of falls in a smaller occupational group.
- The use of financial data, such as average cost of medical treatment and workdays lost to these injuries, would show how much money could be saved with a targeted intervention to reduce falls.
  - This would establish a solid business case to justify

Conclusions

- It may be beneficial to have an industrial hygienist inspect the work environment of the office managers/supervisors to determine why over 70% of this occupation were involved in a fall during this 5-year period.

References