Preventing Slips, Trips, and Falls in Restaurants: A Success Story

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Introduction

It may make for comedy fodder, but in real life, slips, trips and falls are no laughing matter. Slips, trips, and falls are often misunderstood and incorporated poorly into building designs. According to the Liberty Mutual Research Institute for Safety’s 2014 Liberty Mutual Workplace Safety Index, Falls (on same level) account for 15.4% of all workplace injuries. The direct compensation cost for these same injuries in 2012 was a staggering $9.19 billion. It is the second leading cause of worker injuries in the United States.

Through years of consulting with various customers, I have had success with reducing overall slips, trips, and falls for workers and guests. Recently I had success with two restaurant customers in reducing slips, trips, and falls to their employees and guests. In the following pages, I will:

- Review a holistic approach to slip, trip, fall prevention;
- Discuss causes and mechanisms of slips, trips, and falls;
- Understand the importance of a formal prevention program; and
- Identify common solutions related to slips, trips, and falls.

Throughout, I will discuss how the two organizations used this information to strengthen their safety program specifically to address slips, trips, and falls.

Slips, Trips, and Falls

As previously mentioned, same-level slips, trips, and falls are the second leading cause of worker injuries in the United States. Slips, trips, and falls account for 15.4% of all workplace injuries and $9.19 billion in compensation costs. Further, it can be assumed that some injuries related to slips, trips, falls (same level) are classified under other causes in the study such as “bodily reaction.” Additionally, slips, trips, falls to a lower level accounted for $5.12 billion and 8.6% of injuries.
Interestingly, according to a 2001 Liberty Mutual Executive Survey of Workplace Safety, business executives perceive slips, trips, falls (same level) to be a less serious concern. During the study, executives were asked to rate the perceived causes of losses. The survey indicated that executives felt falls were the seventh cause overall, while in fact, they are the second leading cause.

While the statistics above indicate a serious issue in the workplace, we must also be concerned about falls occurring to guests within restaurant environments. Countrywide data for guest incidents is harder to obtain, but evaluating losses for older adults gives an indication of associated costs.

The Centers for Disease Control and Prevention (CDC) indicates that falls are a serious concern for older adults. According to the CDC, the 2012 total direct medical costs of fall injuries for older adults, defined as age 65 or older, was $30 billion. It is estimated that the direct and indirect costs of fall injuries will reach $67.7 billion by 2020. As alarming as the fall data is, this is only a portion of the population. One can assume the increased costs associated with falls when accounting for the remaining U.S. population.

Defining Slips, Trips, and Falls

Prior to addressing the causes of slips, trips, and falls, we must define what each term means. This allows us to better understand the cause and evaluate the solutions fully. It’s important to understand that not all slips or trips will result in a fall. Often times, individuals may ‘catch themselves’ and prevent a fall. However, this bodily reaction alone may result in an injury.

Most people consider a slip to be a situation where we slide for a short distance, often losing balance. Slips typically occur when the heel is striking the walking surface. Our footwear loses grip on the walkway and we lose our balance. Slips usually result in the individual falling backward.

A trip is caused by an obstacle in or on the walking surface. In short, a trip occurs when the foot strikes an obstacle, causing the individual to lose his or her balance. A change of just ¼” is generally considered large enough to cause a trip. A trip will cause the center of gravity to move out of the support area, resulting in a fall. Trips usually result in an individual falling forward.

Individuals are often embarrassed when a slip or trip occurs. This makes reporting of “near misses” very difficult. This natural reaction results in only those slips or trips that result in a serious injury to be reported. Thus, the opportunity be pro-active is often missed.

The causes of slips, trips, and falls are complicated and involve several sciences and disciplines. While the causes are not fully understood, accident/injury mechanisms must be clarified before prevention can be implemented. Often, many restaurants do not take the time to understand these mechanisms and implement prevention solutions that will fail.
Causes of Slips, Trips, and Falls

Even outside the restaurant industry, the causes of slips, trips, and falls remain consistent. In its most basic and simplistic form, a slip occurs as a result of low friction between footwear and the walking surface⁴. Trips occur when footwear contacts an obstacle or drops to a lower level⁴.

There are many individual factors that must be considered for slips, trips and falls, including the aging population, vision and corrective lenses, and perception. For example, aging population is a factor that affects the probability of a fall along with the severity of the injury. A few examples of other factors include:

- medication,
- illness,
- lighting,
- footwear condition,
- floor transitions, and
- humidity.

Further, the ability of an individual to perceive the slipperiness of a floor may affect the probability of a slip, trip, or fall. A common example is how people change their gait when they walk on icy sidewalks. By perceiving the slipperiness of the sidewalk, they have made a conscious change to help prevent a fall. If someone is entering a restaurant and does not expect a change in floor slipperiness, they may not prevent the fall.

Common risk factors⁴ for slips, trips, and fall include:

- loose or bunched up floor mats,
- ice, snow, rain,
- spills on walking surfaces,
- debris on walking surfaces,
- obstructions (chairs, stools, storage),
- poor lighting,
- changes in floor (carpet to tile),
- fast work pace,
- fatigue,
- poor fitting footwear, and
- inappropriate footwear.

Reducing Slips, Trips, and Falls through Formal Prevention Programs

I have had many successes helping companies reduce their slips, trips, and falls. In this paper, I will discuss two specific stories within the restaurant industry. These companies while in the same industry operate with very different customer demographics and employee bases.
“Cafeteria A” is a cafeteria operator with 33 locations throughout the Southeastern United States. Customers choose food items themselves along a food line. Servers are limited to refilling drinks and bussing/cleaning tables. This cafeteria prides themselves on quality made-from-scratch food. Most of the food items served are typical “Southern Country” style cooking, resulting in a heavy grease buildup on back of the house flooring. Average customer demographic tends to skew towards the elderly. This increases the likelihood of a severe injury during a fall. There is no alcohol service.

“Restaurant B” is an up-scale steakhouse with 28 locations throughout the United States. These restaurants provide high quality food and beverage products served at a very high standard of service. These types of restaurants are often referred to as “fine dining” or “white tablecloth” restaurants. Average customer demographic is 40-60 years of age. They serve a wide range of customers including those who visit infrequently for special occasion to those who visit frequently to conduct business. There is alcohol service and it’s a highly promoted part of the meal. Thus, guests may be under the influence of alcohol, which may change their likelihood of a slip, trip, or fall.

Regardless of the differing clientele and surroundings, both businesses were having a high frequency of customer and employee slips, trips, and falls. The chart below illustrates the frequency (claims) associated with slips, trips, and falls for each company.

<table>
<thead>
<tr>
<th>Policy Year</th>
<th>Cafeteria A</th>
<th>Restaurant B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GL</td>
<td>WC</td>
</tr>
<tr>
<td>2011</td>
<td>n/a</td>
<td>31</td>
</tr>
<tr>
<td>2012</td>
<td>n/a</td>
<td>19</td>
</tr>
<tr>
<td>2013</td>
<td>65</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 1

The data shown in Table 1 above is a raw count of claims. When we normalize this data based on customer data (sales data) and employee data (hours worked), we calculate rates to allow for easier comparison against the years. Using the frequency rates calculated, we then focused on reducing falls that were the most severe in nature (i.e. causing the costliest injuries).

Costs associated with the fall frequency listed in Table 1 are included below.

<table>
<thead>
<tr>
<th>Policy Year</th>
<th>Cafeteria A</th>
<th>Restaurant B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GL</td>
<td>WC</td>
</tr>
<tr>
<td>2011</td>
<td>na</td>
<td>$429,171</td>
</tr>
<tr>
<td>2012</td>
<td>na</td>
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</tr>
<tr>
<td>2013</td>
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<td>$23,961</td>
</tr>
</tbody>
</table>

Table 2

As the data shows, by implementing a program, beginning in 2011-2012, they have successfully reduced their frequency and costs. Because ‘near miss’ slips are usually not reported, we can assume a higher frequency of slips within each restaurant.
While the companies may seem very different, the solutions to addressing the slips, trips, and falls were similar. Prior to integrating any solution, each organization required top management executives to recognize slips, trips, and falls as a problem. At both companies, top executives were unaware of the significant impact of slips, trips, and falls on to their organization. These executives could state food and labor costs easily, but were unaware of the financial impact of slips, trips, and falls to their restaurants.

To capture executive support on addressing slips, trips, and falls, I benchmarked each organization within their respective industries. The benchmarking data showed they underperformed their peers, often by a large gap. Further, we discussed both the direct costs, listed in the tables above, and the indirect costs to the organizations. This data when reviewed as a revenue source resulted in the executives’ full support to address slips, trips, and falls within the organization. The executives also came to the realization that the solutions to the issues were within their control.

With the support of the highest-ranking executives in place, we then discussed a formal slip trip and fall prevention program. The continuum below graphically illustrates those areas we feel are necessary to address and reduce/eliminate slips, trips, and falls. In other words, a systematic and comprehensive process is required.

![Figure 1](image)

As illustrated in Figure 1, management and employee involvement is critical to the success of the program. Additionally, we can attack slips, trips, and falls using many of the items listed on the continuum. A common mistake made by restaurants is to only address one area on the continuum. For example, a restaurant may place more mats to prevent slips. However, had they consulted the continuum they would know to evaluate housekeeping, floor surfaces, designs, past injuries, floor surface hazards, footwear and more.

Addressing the falls at Cafeteria A and Restaurant B resulted in the following approach:

- Identifying key management responsibilities
- Analyzing the existing design of the cafeteria or restaurants
- Reviewing and evaluating the existing processes
- Evaluating flooring surfaces and slip resistant footwear
- Determining employee involvement and support, including housekeeping
- Continuous review and analysis
Identifying Key Management Responsibilities
Management at all levels must have a clear understanding of their responsibilities and expectations. This is usually the first step in creating a slip, trip, fall prevention program. This must clearly outline the responsibilities and may include the following:

- Strategic plan – includes new builds, remodels, existing properties, etc.
- Structure – formal outline of expectations by management levels (i.e. store level versus Corporate)
- Periodic Review – details how often management will review the program.
- Contractual procedures - determine risk transfer capabilities.
- Expectations of mid-level or store-level management.

My experience is that individual restaurant managers want to improve their restaurants and prevent slips, trips, and falls. When they are a part of a large corporation, this initiative is often unheard at Corporate. Typically Corporate is more concerned with profit and food costs. Through clearly listed responsibilities, we are able to identify who within a corporation is accountable for the solution.

Analyze the Existing Design
Focusing on those locations that had the most historical falls, on-site verification of the existing design of the restaurants was completed. This allowed us to evaluate the flooring that was in place, floor condition, outdoor/outside conditions, mat use and placement, and lease agreements. The analysis can help to identify some physical items that need repaired. However, the most logical use of this information is to change or modify future design of new locations or remodels. This evaluation can also find and determine issues such as hard turns employees or guests must make, which are common locations of falls. By identifying the risk, we can then work on a solution to remove it from future designs.

Review and Evaluate the Existing Processes
Most companies already have some processes in place to address slips, trips, and falls. This step is evaluating how effective they are at conducting the processes in their daily operations. With a thorough understanding of the existing processes, conducting on-site verification can identify the gaps currently in place.

For example, while many organizations supply mats for their locations to use at front entry, there is little training given on how and when to use additional mats. Another common example is the use of wet floor signs. How has a restaurant communicated with its employees on the use of signs? When should they be used? When should they be removed? Many companies can see great improvement by simply evaluating their existing processes for gaps and improving upon them.

Evaluate Flooring Surfaces and Slip Resistant Footwear
Evaluating the type and condition of flooring is an important step. If available, a slip meter can provide specific quantifiable data. However, as previously mentioned, employee perceptions can tell us about floor slipperiness.
Issues with flooring can be addressed during cleaning, maintenance, repair, remodel or new construction. Some flooring can also be treated to increase its slip resistance. This is determined by the type of flooring and other factors.

Additionally, the enforcement of a slip resistant footwear program is important. Slip resistant footwear can reduce slips, trips, and falls for employees when in good, clean condition. When evaluating footwear, while the use of footwear is important, we should also evaluate how often footwear is changed and overall condition of employee’s footwear.

At Restaurant B, we found inconsistent enforcement of the slip resistant footwear program. At locations where the program was enforced, we found shoes in poor condition with worn soles. Strengthening the overall program and outlining expectations allowed Restaurant B to improve their footwear program.

At Cafeteria A, we also found inconsistent enforcement of the footwear program. In this case, managers would permit employees to continue working with inappropriate footwear. Stronger program enforcement and the availability of ‘overshoes’ now account for a near 100% compliance rate with the footwear program.

Determine Employee Involvement and Support, Including Housekeeping
In addition to strong management support, employee involvement will determine the success of the program. For example, at Cafeteria A, each location created a team of employees who were empowered to make changes related to slips, trips, and falls. The team was also charged with leading by example and conducting short informal training for their peers.

At Restaurant B, employee involvement was improved through the use of local Safety Committees. The committees were very successful and helped to identify some specific issues with the slip resistant footwear vendor. Through this feedback, the company was able to make changes to the footwear program that benefitted the employees and the employer.

In addition to employee involvement, housekeeping is an area to analyze and evaluate. On-site verification is necessary and should be conducted at the busiest times for the operation. Debris on the floor, including water, is a frequent cause of slips, trips, and falls. Items to evaluate include when spills occur, how long before a server returns to clean up. Mapping of past slips, falls may identify key areas within the restaurant to focus on. Evaluation of the cleaning products themselves and their use can also reward us with reduced risk.

Continuous Review and Analysis
As with all safety programs, continuous review and analysis must take place. This is not a one-time event, but a continuous process. Ideally the items listed above become a part of the core values and activities/tasks conducted on a regular basis.

As outlined in previous tables, when both restaurants were focused on reducing slips, trips, and falls they saw the intended outcome/results. However, Restaurant B changed a focus in the 2014 year and started to see an uptick in the frequency of slips, trips, and falls. Seeing the error of their ways, they quickly corrected and are again focused on the leading loss area.
Both companies annually review the entire program in detail and make necessary changes and adjustments. For example, Restaurant B found that the Facilities Management was not included in the program. Identifying this oversight allowed them to include Facilities Management who could then incorporate design elements to eliminate some slips, trips, and falls.

Cafeteria B’s annual review identified that store managers’ were doing a poor job on completing accident investigation for slips, trips, and falls. This resulted in additional training for all managers and an improved expectation.

Summary

Slips, Trips, and Falls are a serious concern and affect both employees and guests. Restaurant operators are specifically affected as their very nature involves large numbers of people (guests) and employees operating at a fast pace. Implementing a formal systemic prevention program can help many restaurants address and prevent slips, trips, and falls.

Bibliography


