

# **MIFACE INVESTIGATION REPORT: #07MI079**

## **Subject: Housekeeper Died From Complications Sustained After Falling Down Residential Stairs**

### **Summary**

On January 8, 2007, a 62-year-old female housekeeper fell down a flight of stairs at a residence and sustained fractures to her spine. She died several weeks later from complications sustained at the time of the fall. The incident was unwitnessed. She was found at the bottom of the stairs by the homeowner when the homeowner returned home for lunch. The decedent was transported to a local hospital (hospital #1) and then transferred to another hospital (hospital #2), where she underwent surgery for fractures of her spine. After a period of recovery in the hospital, she was transferred to a local long-term care center. After several weeks, the individual's health began to deteriorate, and she was transferred to hospital #2, where she died.

### **RECOMMENDATIONS**

- When vacuuming stairways, housekeepers should assess whether the vacuum may be safely placed at the top of the stairs or whether the vacuum should be placed at the base of the stairs.
- Housekeepers should attempt to keep one hand on the stair rail at all times while ascending and descending a stairway.
- Home cleaning services/self-employed housekeepers should consider using backpack/hip-style vacuum cleaners.

### **INTRODUCTION**

On January 8, 2007, a 62-year-old female housekeeper fell down a flight of stairs at a residence and sustained fractures to her spine. She died several weeks later from complications sustained at the time of the fall. MIFACE learned about this incident after receiving the death certificate. On November 1, 2007, MIFACE interviewed the decedent's daughter at the daughter's home. The decedent's daughter provided the MIFACE researcher with the name, address and phone number of the homeowner where the incident took place. MIFACE traveled to the home, but the homeowners were not at home. MIFACE wrote a letter to the homeowners explaining the MIFACE program, providing MIFACE contact information, and why MIFACE would like to speak with them. The daughter was unable to provide answers to several specific questions, such how many stairs were in the flight of stairs, if the stairs were carpeted or wood, the surface she fell to (concrete basement floor, wood, tiled, or carpeted floor), how wide the stairs and the staircase were, etc. MIFACE placed a phone call to the homeowners and the phone company indicated that the phone had been disconnected. The homeowners did not contact the MIFACE researcher.

The decedent was the owner of the home cleaning business. She did not advertise and all of her business was obtained by word of mouth. She worked seven days a week. The home she was cleaning was an old Victorian home. The decedent usually cleaned one home a day, although

some of the homes she cleaned were so big she needed two days to clean them. She did not have any employees.

MIOSHA did not conduct a compliance inspection of this incident.

## **INVESTIGATION**

The daughter stated that her mother began work fairly early on the morning of the incident. The decedent would get up at 5:00 a.m., have a cup of coffee, and call her daughter. She would then leave for work, arriving at the home approximately 7:00 a.m. Normally, the decedent would work until 1:00 p.m. to 2:00 p.m., so she could arrive home and provide day care for her grandson. The decedent would not use a vacuum that was present in the home she was cleaning. Her mother always used an “old school” canister vacuum, which she had used for at least the past 15 years. The daughter thought that the vacuum hose might have been approximately five feet long. The vacuum was not available for MIFACE inspection because the daughter no longer had possession of it.

The decedent had cleaned the home where the injury occurred for the past 20 years. The incident occurred in the late morning, and the daughter thought that maybe her mother was hurrying to finish so she could get back home to watch her grandson. While on a flight of stairs, the decedent fell. The vacuum was found at the base of the stairs with the decedent. The decedent did not lose consciousness when she fell.

One of the homeowners returned home for lunch and found the decedent and the vacuum at the base of the stairs. The homeowner called for emergency response. Emergency response arrived and after stabilizing the decedent, transported her to a nearby hospital (hospital #1). Due to the extent of her neck and spine fractures and decreased respiratory drive, the decedent was transported to a second hospital (hospital #2) where she was treated and placed in a halo brace. After the halo was in place, she was discharged to a long-term care center with the halo traction in place. According to the decedent’s daughter, the decedent was having difficulty with pain control for a week while in the long-term care center. The decedent’s pain medication was increased to control the pain. After several doses of this pain medication, the decedent was described as confused, and her evening dose was withheld. The next day (ten days after the fall), the decedent was unresponsive. She was transported from the long-term care center to hospital #1’s emergency room. After stabilizing the decedent, the decedent was then transferred by EMS to hospital #2.

Hospital #2 diagnosed sepsis, gastrointestinal bleed, and a possible narcotic medication overdose. She was medically managed, but deteriorated clinically and died four days after admission to hospital #2.

## **CAUSE OF DEATH**

The cause of death as stated on the death certificate was medical complications due to or as a consequence of spine fractures due to or as a consequence of a fall down stairs. An autopsy was performed. Toxicology was not performed at the time of hospital admission.

## RECOMMENDATIONS/DISCUSSION

- When vacuuming stairways, housekeepers should assess whether the vacuum may be safely placed at the top of the stairs or whether the vacuum should be placed at the base of the stairs.

It is unknown if the decedent was in the process of vacuuming the stairs or carrying the canister vacuum from one level to another when she fell.

If she was vacuuming the stairs, it is unknown where she had placed the vacuum – at the base of the stairs or at the top of the stairs. If the decedent had placed the vacuum at the top of the stairs, the five-foot hose length did not permit her to vacuum the length of the stairs. One possible scenario was that, while vacuuming, the decedent extended the hose beyond its natural length, and pulled the vacuum from the top of the stairs. While the vacuum was falling down the stairs, it may have hit her causing her to lose her balance and fall. Or, while attempting to stop the vacuum from continuing down the stairs, she may have lost her balance and fallen to the base of the stairs. Another possible scenario was that she had placed the vacuum at the base of the stairs. As she was vacuuming up the stairs, she may have vacuumed higher than the hose could comfortably reach, which caused the vacuum to be pulled up the stairs. This extra weight may have caused her to lose her balance, and fall.

Although it seems obvious, housekeepers should assess whether the length of the vacuum hose can permit them to place the vacuum at the top of the stairs or whether a safer work practice would be to place the vacuum at the base of the stairway.

- Housekeepers should attempt to keep one hand on the stair rail at all times while ascending and descending a stairway.

Often, housekeepers are carrying an object or several objects at one time, such as a vacuum or cleaning bucket from one level of the home to another level of the home while ascending or descending stairs. Carrying objects on stairways can contribute to a fall down (or up) a stairway by altering an individual's center of gravity and diverting their attention from proper foot placement on the stair.

Although it would add a little bit of time to make more than one trip up and down the stairs, MIFACE encourages housekeepers to consider doing so. By carrying only one object at a time, one hand may be kept on the stair rail to help balance the individual as they ascend/descend the stairs and may keep the person from falling completely down the stairs.

- Home cleaning services/self-employed housekeepers should consider using backpack/hip-style vacuum cleaners.

Numerous studies have shown backpack and hip-style vacuums provide good quality vacuuming capabilities and increased worker productivity. Because the vacuums are worn on the body, workers have more maneuverability and greater variety in their range of movements. Backpacks

have been determined to use half as much operator energy as an upright vacuum for equal amounts of cleaning.

## REFERENCES

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**Key Words:** Fall, House Cleaning, Vacuum

MIFACE (Michigan Fatality Assessment and Control Evaluation), Michigan State University (MSU) Occupational & Environmental Medicine, 117 West Fee Hall, East Lansing, Michigan 48824-1315; <http://www.oem.msu.edu>. This information is for educational purposes only. This MIFACE report becomes public property upon publication and may be printed verbatim with credit to MSU. Reprinting cannot be used to endorse or advertise a commercial product or company. All rights reserved. MSU is an affirmative-action, equal opportunity employer.

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