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SAFETY FOCUSED FOOTWEAR SELECTION

Abstract

This paper is intended to provide guidance and evaluation criteria for proper selection of patient safety footwear. It is important to understand all footwear is not constructed the same and may not provide the equal safety characteristics.

Healthcare facilities nationwide are implementing fall prevention programs utilizing patient safety footwear as a cornerstone in their protocol. As an essential element, the quality and fit of the footwear is as important as the program utilizing it.

It is the facility's responsibility to evaluate and select the most effective product. However, footwear is not currently considered a medical device and therefore is not subjected to any national quality or performance standards.

Prevalence

Falls occur in all types of healthcare institutions, in all patient populations and, are a common cause of morbidity. The Institute for Healthcare Improvement (IHI) states "patient falls are among the most common occurrences reported in hospitals and are a leading cause of death in people ages 65 or older. Of those who fall, as many as half may suffer moderate to severe injuries that reduce mobility and independence, and increase the risk of premature death. About 50 percent of older adults hospitalized for hip fracture never regain their previous level of function."

Industry Response

In an effort to reduce the occurrence of falls as well as associated adverse events, the Center for Medicare and Medicaid Services (CMS) identified falls and trauma as one of the ten categories of hospital-acquired conditions with potential payment implications.

Additionally, the Joint Commission has established goal number nine of the 2009 National Patient Safety Goals as "reduce the risk of patient/resident harm from falls" through the implementation of fall reduction programs.

Industry Response (continued)

A Fall Assessment Tool developed by Johns Hopkins Hospital in 2004 and modified in 2006 identifies patients at moderate risk for fall as well as patients at high risk. High risk criteria include a history of a fall six months prior to admission to the hospital and/or a fall during the current hospitalization. Other criteria include medications, patient care equipment, mobility, cognition and elimination.

Selection Considerations

The main focus of patient footwear must be on safety. Product specifications required to help ensure patient safety in footwear include tread effectiveness, proper fit, and patient comfort.

Tread effectiveness is facilitated by coefficient of friction and appropriate coverage. Coefficient of Friction (CoF) is defined as the force of the friction when two surfaces are rubbed together, such as the force between the floor and the footwear tread when a patient is ambulating. A higher CoF results in improved stability for the patient by increasing slip resistance. Another element in CoF is the tread factor, which is the amount of surface area covered by the nonskid pattern. The tread factor should be large in order to maximize contact with the floor surface.

Patient compliance is another component in the safe and appropriate use of patient footwear. If footwear is comfortable and fits correctly, compliance is enhanced. Footwear that is too large could result in complications such as incorrect placement of tread on foot, which could subsequently lead to a fall. Proper sizing and placement is essential to reduce twisting of footwear on the patient while in bed. Twisting can result in the patient ambulating without the proper nonskid coverage on the bottom of the foot. Many facilities prefer double sided tread patient safety footwear as they feel it provides added protection against potential falls.

Patient safety footwear is color coded either by size or to indicate the degree of mobility. Footwear in orange, red and yellow, often referred to as "risk management" or "Urgent" color lines, are available to aid in identifying those patients

Selection Considerations (continued)

at increased risk for falls. Although there are no federal regulations, many hospitals have implemented their own

Falls Prevention Programs which identify the use of patient safety footwear. For example, the state of California has implemented a policy referred to as "code yellow" which designates yellow as the color code for high-risk patients. This alerts the caregiver that the patient needs assistance when ambulating to help prevent a fall. Many other states and healthcare facilities are considering implementing similar color coding policies. It is important that nurses are familiar with any fall-risk color codes used in their facility.

An additional option to help identify patients at risk for falls is the use of a tri-color or traffic light designation. In June 2010, North Mississippi Medical Center, a 600 bed tertiary medical center along with its five community hospitals instituted their Fall Prevention Program utilizing universal fall prevention criteria. Using the Hendrich II Fall Risk Model, if a patient scores five or greater, they are assessed as at risk and are provided yellow footwear, yellow wristband, yellow magnetic door strip, and a yellow sticker is placed on the patient chart. If a patient experiences a fall, they are provided red footwear, yellow wristband, a red star is placed on the door, and a red sticker placed on the patient chart. For patients identified as not at risk, green footwear is provided.

Conclusion

In conclusion, the primary focus when selecting patient footwear should be on safety and compliance.

Key considerations should be proper fit and comfort to improve compliance as well as proper tread coverage with high CoF results for improved traction. Patient assessment and identification of fall risk is an essential component in determining the appropriate footwear and helping to ensure patient safety.

Torrey, Trisha, What Is a Medical Error? A Master List of Never Events from the National Quality Forum, March 3, 2008, <http://patients.about.com/od/atthehospital/a/mederrorlist.htm>

*The Joint Commission, 2009 National Patient Safety Goals Hospital Program, http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/09_hap_npsgs.htm
Charney, William, Handbook of Modern Hospital Safety. Florida: CRC Press, 2009.*

Reducing Harm from Falls; Institute For Healthcare Improvement (IHI) <http://www.ihl.org/IHI/Topics/PatientSafety/ReducingHarmfromFalls/>

Appendix A: The Johns Hopkins Hospital Fall Assessment Tool (Modified) https://www.regonline.com/custImages/.../Modified_Johns_Hopkins.pdf

*Hendrich II Fall Risk Model
AHI of Indiana, Inc., 2007*

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