



Fall Prevention

Michigan Dialysis Services – Livonia

Contact Information

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Category:	Patient Falls
Type of Facility:	community-based dialysis facility
Number of Patients:	96
Number of Physicians:	4

Background

To address the high risk of patient falls among hemodialysis patients, Dr. Heung along with Therese Adamowski, RN, Dr. Jonathan Segal, and Dr. Preeti Malani, undertook a study of patient falls in a University of Michigan Health System dialysis clinic. Dr. Heung is Assistant Professor, Internal Medicine, and Director, Inpatient Dialysis Programs and a rounding physician at Michigan Dialysis Services - Livonia.

The team began the study with a root cause analysis of all in-center fall incidents during a 4-year baseline period. All fall incidents are investigated and reported as part of the facility's quality assurance measures policy. The team reviewed fall locations, timing relevant to dialysis treatment, injuries sustained, medical treatment and any contributing factors.

During the baseline period, a total of 14 falls occurred among 12 patients. Of those falls, 7 occurred pre-dialysis, 1 during dialysis, and 6 occurred post-dialysis. Falls occurred most commonly at the dialysis chair (35.7%) and at the scale (26%). While most (57%) did not result in serious injury, two patients suffered a minor head injury and one a fractured pelvis. Additionally, the review revealed that seven staff and one family member had also fallen during the baseline period.

Policies and activities implemented

Utilizing the findings of the quality improvement review, the team identified several risk factors and targeted interventions. The interventions were performed between January and March 2008 and focused on both the physical environment and staff and patient education on fall prevention.



To reduce the tripping hazard posed by the elevated platform scale, University of Michigan Health System constructed an in-ground scale. Non-slip mats were placed at all sink areas and dedicated towels were placed at each dialysis machine to wick any potential leaked fluid and reduce the hazard of wet or slippery floors. Additionally, a new policy was implemented requiring full lighting be used during patient shift changes, rather than allowing low ambient lighting that limited vision.

University of Michigan Health System implemented a new fall-prevention education program for all staff involved in direct patient care. It includes presentations by fall-reduction educators, focusing on identifying high-risk patients, eliminating risk factors at the dialysis center and the patient's home, and educating patients on fall prevention.

The facility also developed a fall-risk assessment tool. Those patients that have been identified as high-risk for falls are required to have a documented action plan to reduce their risk, such as mandatory staff assistance with transfers, use of a wheelchair while in center, staff assistance with post-dialysis weighing, and/or use of a lift device.

Patients are educated on fall risks and prevention by the dialysis center staff and specifically, by the renal social worker. The education is reinforced through postings on the in-center bulletin board and informational handouts.

Outcomes

No fall occurred during the three month implementation period. In the 21 months post-implementation, two patient falls occurred. One patient fell in the parking lot post-dialysis after refusing staff assistance. The other fell from her dialysis chair after becoming light-headed. No significant injuries were reported for either patient. The facility continues its staff and patient education program and the policies remain in place.

Findings from the baseline study and implementation were published in the [Clinical Journal of the American Society of Nephrology](#). [Heung M, Adamowski T, Segal JH, Malani PN. A successful approach to fall prevention in an outpatient hemodialysis center. Clin J Am Soc Nephrol 5(10): 1775-9.]

Recommendations

Dr. Heung recommends utilizing a multidisciplinary approach of getting input from physicians, nurses, technicians, patients, social workers. He noted, "Each member approaches things slightly differently, and it is enlightening to learn about each others' perspectives. As an example, when we started the project I was focused on medical changes (e.g. dialysis prescription) and never guessed that the key interventions would be environmental in nature!"