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Preventing Falls in the Elderly

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Problem Identification: Falls in the Elderly in the United States

- Falls are the leading cause of fatal and non-fatal injuries for older Americans[1] Annually there are:
  - 2.8 million injuries treated in emergency departments
  - 800,000 hospitalizations
  - 27,000 deaths
- More than 95% of hip fractures are caused by falling[2]
- Falls are the most common cause of traumatic brain injuries[2]
- Falls are associated with significant morbidites[3]
  - Hospital stays are twice as long in elderly patients who are hospitalized after a fall than in elderly patients who are admitted for another reason
  - Associated with decline in activities of daily living along with physical and social activities
  - Put elderly person at a greater risk of institutionalization

Problem Identification: Falls in the Elderly in Vermont

- Each year, more Vermonters 65 or older die from falls than motor vehicle accidents[4]

- Falls in Vermonters 65 years of age or older have increased by 423% between the years 2000-2009[4]

- According to the 2014 Behavioral Risk Factor Surveillance Survey:[5]

  - 125 Vermont adults over 65 died as a result of a fall in 2014

  - 5,445 went to local emergency departments due to a fall

  - 1,600 adults in Vermont were hospitalized

The High Cost of Falls in the US and Vermont

- In 2013, the cost of falls in the US was $34 billion

- Expected to increase to 67.7 billion dollars by 2020 because of the aging population

- In the year 2009, the cost to treat fall related hospitalizations in elderly Vermonters was $39,400,000[4]

- While many community programs are available around the country for fall prevention, Vermont faces unique challenges due to its vast rural community[6]

  - Transportation-much of the target population has little or no regular transportation options

  - Lack of funding

Community Perspective

- Mike Matteis, PT, DPT, Dan Wyland P.T & Associates

  - Works with 1-2 patients a week who have suffered from falls

  - Many programs to raise awareness about falls and to decrease fall risk are available in the area, the problem is attendance and participant compliance

  - Personally gives a presentation to the Northeast Kingdom community on falls once a year. This never is well attended

  - Three basic tests are critically important for identifying fall risk in a patient

    - 4-stage Balance Test, 30 Second Chair Stand Test and the Timed Up and go Test

  - Trying to speak with primary care providers in the area about how to properly screen for fall risk.

Community Perspective

- Jody Taylor, RN BSN-Chronic Care Coordinator
  - "There are numerous resources available in the Northeast Kingdom for people at high risk of falling"
- Nurses at Corner Medical, Northeastern Vermont Regional Hospital and the Pines Rehabilitation and Health Center
  - There were two common themes among all of the nurses that I talked with
    - All talked about extensive protocols that are in place at each center to both screen and care for patients that have fallen
    - All acknowledged that falls are still a significant problem and that even with these protocols in place, there is still a lot of room for improvement

Intervention and Methodology

- Intervention:
  - Create an educational handout for patient education that will talk about the dangers of falls and how to prevent them. Also will give a brief presentation to educate providers at Corner Medical in Lyndon about how to assess fall risk and about the community resources available for the patients that are at a high fall risk.

- Methods
  - Literature review to assess the impact of falls and how to address this risk
  - Had discussions with nurses at Corner Medical, Pines Health and Rehabilitation Center and Northeastern Vermont Regional Hospital about fall protocols and screening to look at what currently is being done to address fall risk in the elderly
  - Also talked with a chronic care coordinator at Corner Medical and a local physical therapist to see what local programs are available for the elderly who have a high fall risk

Results/Response

▶ Providers at Corner Medical responded positively to this project. All of the providers have witnessed the enormous impact falls can have on their elderly patients and want to help to address this problem. The time a provider can spend with a patient can be very limited and so a pamphlet can help to improve the quality of patient education that is provided.

▶ Additionally, providers do not have the time to go through balance and strengthening exercises with patients so they refer out to physical therapy or suggest local exercise classes. Providers acknowledged gaps in their knowledge of local resources and programs in the community. They also said they learned new screening tools that could be useful in their assessments when referring patients out to physical therapy.

Evaluation of Effectiveness and Limitations

▶ How effectiveness can be measured in the future

- ▶ Can be measured in the EMR. Patient's response to the handout can be noted at the time it was given. At future visits, questions about whether or not the patient implemented any of the recommendations could be asked

- ▶ Can also be measured by looking at community participation in local exercise programs and local presentations on falls

- ▶ Ultimately, the effectiveness can be measured by looking at the number of admissions to the hospital for falls and the number of calls for EMS to respond to a fall

▶ Limitations of this project

- ▶ Not enough time to talk to patients about if their behaviors have changed or if their understanding of falls had changed

- ▶ Handing a patient a pamphlet on falls will not change behavior or fully motivate a patient to exercise or fall proof their house. Providers have to be fully involved in the screening process and in motivating the patient. Additionally, the rural nature of Vermont makes it challenging and time consuming for patients to make it to PT appointments, exercise classes and even doctor visits. Providing programs that are accessible to everyone is the key to success.

Recommendations for Future Interventions/Projects

- To look at the success of educating patients on both the risks of falls and ways to diminish these risks, patients could be interviewed about their knowledge of local programs that work to improve balance/strength in the elderly or that educate patients about how to decrease their risk for falls

- Due to the challenge of getting elderly patients to be compliant with balance and exercise programs, a project could look at patients referred to physical therapy for a high fall risk and their compliance with their program

- Because primary care providers are so instrumental in screening and educating patients about falls, primary care providers in the area could be interviewed to look at how each one screens for falls and what education a patient is given once they are identified as having a high fall risk

References

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