The Use of Fit Bits to Monitor Sleep Patterns for Persons with Dementia

Presented by: Megan Van De Hey
Customer Service Leadership Project

INTRODUCTION

Brewster Village is a 204-bed, County-owned, short term rehab and long term care nursing home located in Appleton, Wisconsin. The Division of Quality Assurance (DQA) approved for the use of Civil Money Penalty funds in the amount of $5,000.00 to utilize Fit Bits to monitor sleep and wake patterns in the dementia population. The grant supported the purchase of 12 Fit Bits for participants. The final selection of participants was determined by the Behavior and Restraint Review/Falls Incident Report Team.

DATA COMPARED TO NATIONAL AVERAGES

- The first two months of preliminary data shows that the residents are averaging 4.5 hours a sleep each night. The recommended amount of sleep for individuals 65 years and older is 7-8 hours each night.

Brewster Village Rankings
- 17.4 percentage points above the State average for falls.
- 20.2 percentage points above the National average for falls.
- 0.5 percentage points below the State average for falls with major injuries.
- 0.1 percentage points below the National average for falls with major injuries.

CURRENT KNOWLEDGE

Multiple studies have shown that sleep disturbances affect the overall quality of life for individuals in long-term care facilities and especially those with a diagnosis of dementia. There is a need for more research and interventions to improve sleep patterns in order to improve and reduce falls, medications, weight loss, and behaviors. The utilization of Fit Bits is a non-invasive way to monitor sleep patterns of residents without disturbing their daily routines. It is using modern technology to complete an overall comprehensive assessment to improve quality of care.

OBJECTIVES AND GOALS

The overall objective of the program is to be able to provide better care and improve overall quality of life for residents by adapting to their individual lifestyle patterns.

- Establish individualized care plans to provide enhanced care.
- Develop individual daily routines.
- Distinguish fall patterns.
- Individualize meal planning.
- Monitor medication adjustments.
- Improve overall psycho-social well-being.

METHODOLOGY

- Compile an itemized budget for the $5,000 approved.
- Determine a time frame of 6 months for data collection.
- Submit the grant to DQA and receive approval of the grant.
- Approval received on February 15th, 2017.
- Review CASPER reports and other related reports to narrow down residents with sleep disturbances and a high number of falls.
- Meet with the Behavior and Restraint Review/Falls Incident (QAPI) team to select 12 residents to participate in the study.
- Receive consent from candidates and/or their representative.
- Purchase Fit Bits and IPads to perform the study.
- Assign a Fit Bit to each resident.
- Communicate the details of the study to staff.
- Put together an information binder for each neighborhood.
- Sync data from the Fit Bits every Monday and Friday.
- Charge Fit Bits every Monday and Friday.
- Compile the data into monthly reports.
- Run monthly fall reports.
- Review data reports with the falls QAPI team.
- Submit quarterly data reports to DQA.

PRELIMINARY FINDINGS

- Distinguish fall patterns.
- Compare previous CASPER report percentages to those percentages after implementation and action of the Fit Bit Program.

FEEDBACK

- Educate and train staff about the program.
- Share data and results at huddles and QAPI meetings.
- Communicate the objectives and goals.
- Discuss the success and areas for improvement.
- Review the data regularly at QAPI meetings.
- Receive feedback from all levels of departments on ways to continuously improve the program.

RECOMMENDATIONS

- Compare the data from the Fit Bits to data in the electronic charts.
- Perform audits to ensure Fit Bits are being worn and properly worn.

PRELIMINARY DATA

WEEK 1

WEEK 2

WEEK 3

SLEEP AND FALL DATA FOR TWO MONTHS

PDCA
- To ensure continuous improvement throughout the program, the Plan, Do, Check, Act (PDCA) methodology will be used.

CASPER Reports
- Compare Brewster Village’s overall quality indicator percentiles to State and National Percentages.
- Compare previous CASPER report percentages to those percentages after implementation and action of the Fit Bit Program.

NEXT STEPS

- Communicate the objectives and
- Goals.

Recommendations

- Communicate the objectives and
- Goals.

- Educate and train staff about the
- Program.
- Share data and results at huddles
- And QAPI meetings.
- Discuss the success and areas for
- Improvement.
- Perform audits to ensure Fit Bits
- Are being worn and properly worn.

Acknowledgments: Preceptor: Morgan Hinkley, DON: Chad Mackenzie, Behavior and Restraint Review/Fall Incident Team, Neighborhood Staff including Nurse Managers, Nurses, and Certified Nursing Assistants, Brewster Village Residents, Division of Quality Assurance, UW-Eau Claire HSMC Professors, and UWEC Learning and Technology Services.