Cardiac Fitness purchased new fitness equipment. With new exercise physiologists, pharmacists and registered nurses all assigned to address the needs of the lower functional heart failure population, failure as indication for cardiac rehabilitation referrals and cardiovascular conditioning, nutrition, stress management, the average male patient is 62.75 years old and 65 years old for females; an age group at higher risk to suffer from fall related injuries. Falls are the leading cause of injury at the CCF. Research demonstrates, however, that regular exercise, through increases in flexibility, core strength and range of motion, can help prevent many of the falls older patients’ experience. However, with new equipment, despite regular supervised exercise, the center noticed that falls were occurring at an increased rate.

Backed by the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) since 1996, The Miriam Hospital Center For Cardiac Fitness (CCF) is a 12,000 sq. ft. state of the art rehabilitation facility staffed with over 20 experienced health care professionals. Cardiologists, nutritionists, behavioral health specialists, exercise physiologists, pharmacists and registered nurses all work collaboratively to address needs of cardiac rehabilitative patients; providing the correct balance of cardiovascular conditioning, nutrition, stress management, education, and individual support services for the primary goal of secondary prevention.

The Center For Cardiac Fitness facility is utilized for varied rehabilitation and prevention/work/wellness programs: cardiac and pulmonary rehabilitation, cardiospinal medical maintenance, employee fitness, and the Health for Life Primary Prevention Program implemented in 2013. In an already large program, with recent approval of Heart Failure as indication for cardiac rehabilitation referrals and patient volume are still on the rise!

In 2011, in an effort to continually provide a safer, state of the art facility for rehabilitative patients, The Center For Cardiac Fitness purchased new fitness equipment. With new equipment came unexpected environmental risks and increased falls. The Center for Cardiac Fitness’ fall rate in 2012 (.246 falls/1000 visits) almost doubled from that of 2011 (.246 falls/1000 visits) attributed to risks associated with new, state of the art exercise equipment.

In addition to the introduction of new equipment, the Center supports a large patient volume which has grown 18% over the last decade with a 140% increase in patient referrals.

Decrease fall rates attributed to new exercise equipment while also meeting the challenges of program growth and the needs of the lower functional heart failure population.

Improvement initiatives and interventions were implemented in the following 4 areas:

- **Patient Education**
  - Assistive devices & nap sacks purchased for patients at risk for fall
  - Time Up & Go (TUG) threshold reduced
  - INSTRUCTIONAL SAFETY CHECKLIST: With return demonstration
  - Equipment Modifications: to simplify operations and improve safety when mounting & dismounting
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- **Equipment Modifications**
  - Disconnect adjunct operating Instructions
  - Equipment Modifications: to simplify operations and improve safety when mounting & dismounting
  - Equipment Modifications: to simplify operations and improve safety when mounting & dismounting

- **Adaptations to the Environment**
  - Removed equipment to reduce congestion & improve flow of patient traffic
  - Implemented access points to entry & exit the exercise floor & to avoid cut through

- **Measure Evaluation & Assessment**
  - CCF treats patients of all ages ranging from 29 – 100 years of age. The average male patient is 62.75 years old and 65 years old for females; an age group at higher risk to suffer from fall related injuries. Falls are the leading cause of injury at the CCF. Research demonstrates, however, that regular exercise, through increases in flexibility, core strength and range of motion, can help prevent many of the falls older patients’ experience. However, with new equipment, despite regular supervised exercise, the center noticed that falls were occurring at an increased rate.

- **Graph 1** depicts the Number of Falls per Year at The Center For Cardiac Fitness.
- **Graph 2** depicts the Incident rate per 1000 visits at The Center For Cardiac Fitness.

The Miriam Hospital Center For Cardiac Fitness treats patients of all ages ranging from 29 – 100 years of age. The average male patient is 62.75 years old and 65 years old for females; an age group at higher risk to suffer from fall related injuries. Falls are the leading cause of injury at the CCF. Research demonstrates, however, that regular exercise, through increases in flexibility, core strength and range of motion, can help prevent many of the falls older patients’ experience. However, with new equipment, despite regular supervised exercise, the center noticed that falls were occurring at an increased rate.