**EP15-5 CARDIOVASCULAR REHABILITATION: PROCESS IMPROVEMENT**

**Implemented: September 12, 2012**

**Update: February 21, 2013**

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| **F** | Find A Process To Improve |
|  | Our outpatient Cardiac Rehabilitation Program is designed to provide cardiac risk factor modification, exercise, education, and counseling for patients with cardiovascular disease. Intended outcomes of the program include risk reduction of future mortality and additional cardiac events and improvement of patient’s ability to manage all aspects of the disease process. One of the identified negative complications of acute coronary incidents and their treatment is increased depression. Often depression goes unidentified and untreated in this population, leading to poorer outcomes evidenced by lower quality of life, extended recovery, and higher complication rates. Prior to this study, no formal process to identify clinically depressed patients was in place. The Program Medical Director identified a need to have a standardized identification process in place based on staff and physician request and patient need. |
| **O** | Organize A Team |
|  | The team consisted of the Cardiac Rehabilitation Medical Director, RNs and other staff members including exercise physiologist, CNAs, dieticians, psychologist, and interns. |
| **C** | Clarify Knowledge of the Current Process |
|  | At baseline (program entry to CRII) patients are given the Dartmouth Questionnaire which is designed to measure Quality of Life (QOL). This questionnaire measures several psycho/social domains and is not designed to be a clinical questionnaire to measure depression. Responses from the Dartmouth were analyzed individually and as aggregated data. No systematized intervention was in place to provide services/care for patients with increased QOL scores. |
| **U** | Understand Variation |
|  | No process was in place to track the effect on depression levels of patients as they participated in the program. Individual nurses and exercise physiologist intervened according to their discipline training and after consulting with other team members. |
| **S** | Select An Improvement Strategy |
|  | All patients entering the program will be screened for clinical depression and referrals as appropriate will be made. This adjunct treatment, along with program participation, is hypothesized to produce significant changes in the depression scores of patients identified as being depressed. |
| **P** | Plan The Pilot Improvement And The Data Collection |
|  | In addition to the Dartmouth QOL Questionnaire, the program staff proposed that the Patient Health Questionnaire-9 (PHQ-9) be administered to patients upon admission to and again at discharge from the Cardiac Rehabilitation program. The PHQ-9 is a nine-item depression scale designed to screen for depression. Patients who score 15 or higher on the initial PHQ-9 (indicating the likelihood of moderately severe or severe depression) would receive the following interventions:   * The patient is questioned regarding suicidal ideation by the nursing staff * The Medical Director is notified of their condition * The Medical Director then notifies their Primary Care Physician * The Medical Director makes a referral for behavioral health treatment (follows up to see if the behavioral health referral has been followed up) |
| **D** | Do The Pilot Improvement And Collect The Data |
|  | In September of 2012 the procedure detailed above was implemented, including the collection of pre- and post-treatment scores on the PHQ-9. |
| **C** | Check The Results Of The Implementation |
|  | The following measurements will be used to determine the success of the process and program effectiveness:   1. Number of patients referred to Medical Director/ Number of patients with elevated scores greater than 15. 2. Benchmark pre/post PHQ-9 scores with the AACVPR National Registry   Data entry into the National Registry began in Jan. 2013 and results are pending at this time. |
| **A** | Act To Hold The Gain And Continue Improvement |
|  | Patients identified by the PHQ-9 as having moderately severe or severe depression are now recognized early, closely monitored and referred for treatment/counseling. |