The Implementation of Cognitive Function Assessment During Cardiac Rehabilitation

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Introduction

Cognitive impairment is increasingly being recognized as a contributor to increased readmission rates for patients with heart failure. An abstract presented at the American College of Cardiology Scientific Sessions in 2014 found that whether heart failure patients were discharged home or to a facility, those that scored poorly on their cognitive assessment had increased readmission rates at 30-days. A simple tool to assess for cognitive impairment is a test called the mini-cog. This test includes the recall of three non-related items and a clock drawing. The three recall words are provided to the patient at the beginning of the evaluation; then the clock component of the testing is performed; and lastly, the patient is asked to provide as many of the three recall words that they can. The test is scored from 0-5. Patients receive one point for each of the items they correctly recall, and two points for drawing the clock correctly with the requested time correctly identified. Patients receive zero points for an abnormal clock. A score of 2 or less is considered to be indicative of cognitive impairment. This mini-cog evaluation has been shown to correlate well with the Montreal Cognitive Assessment (MoCA) test used to evaluate for cognitive impairment.

Program Design

The cardiology and cardiac rehabilitation departments at our institution agreed that evaluating for cognitive impairment may identify patients at an increased risk of readmission, as well as mortality and morbidity. Exercise physiologists within the cardiac rehabilitation program were trained on the administration of the mini-cog evaluation. All inpatient cardiac rehabilitation referrals at our institution are eligible to receive the mini-cog evaluation. The mini-cog is administered during standard inpatient cardiac rehabilitation sessions. The score is included within the cardiac rehabilitation session note in the electronic medical record. Patients having a mini-cog score of 2 or less are referred to occupational therapy for formal cognitive evaluation. Those receiving a diagnosis of cognitive impairment then receive a visit from the case management service and home health care is arranged. The goal is to identify factors that have the potential to increase the likelihood of readmission for each individual patient, and then formulate a plan to mitigate those factors. Medication adherence is stressed, with a focus on techniques that promote an easy to follow medication regimen.

Mini-Cognitive Screen 2017

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<th>Patient: Date</th>
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1. Instruct the patient to listen carefully and remember the following three words: table, car, orange
2. Instruct the patient to draw the face of clock in the space below.
3. Once the patient has drawn the clock face then have them position the hands of the clock to show a time of 9:10.
4. Ask the patient to recite the three recall words.

Scoring

1. Word recall score __________
   1-point for each word correctly recalled.
2. Clock drawing score
   2-points for correctly drawing the clock, with time correctly identified.
   0-points for abnormal clock
3. Total test score
   A score of 0-2 is a positive screen for cognitive impairment. Inform patient’s RN.
   A score of 3-5 is a negative screening for cognitive impairment.

Results

Since April 2015 our cardiac rehabilitation department has been administering the mini-cog evaluation to inpatient cardiac rehabilitation referrals. Approximately 60-70% of these referrals have received the mini-cog evaluation. An average of 5% of the evaluations score 2 or less on the test, which is suggestive of significant cognitive impairment.

Program Summary

A simple mini-cog evaluation administered by exercise physiologists has been easy to incorporate into inpatient cardiac rehabilitation sessions. Significant cognitive impairment has been identified in approximately 5% of patients receiving the mini-cog evaluation at our institution. We intend to conduct a future research project evaluating the readmission rate and mortality for cardiac rehabilitation patients with significant cognitive impairment.

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References: