

Exercise and Quality of Life Outcomes in a Patient with Stage 4 COPD

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Abstract:

A 56-year-old female diagnosed with end stage COPD was referred to a rural based cardiac and pulmonary rehabilitation program. Medical history and initial baseline physical assessments were measured including resting vitals, height, weight, 6-minute walk test, and the HSQ-SF36® quality of life questionnaire. She was given a basic orientation to exercise equipment including Nu-Step® and five different band and dumbbell resistance exercises prescribed at 2 sets of 12 (RPE rating = 12 to 14). An exercise prescription for the exercise program three days per week was developed for approximately one hour at 2 to 3 METs with intermittent exercise on the Nu-Step® at a 4:1 ratio at 90% of estimated max level. After the initial assessment (August, 2014), she attended once, was absent for a 3 month period, then returned and was compliant with 8 sessions. She discontinued sessions at that point and was absent for two months. She came back for a third time on Feb. 2nd, 2015 after being hospitalized for 2 weeks secondary to pneumonia and bronchitis condition. She now uses two oxygen (2 liters) and assistive breathing techniques. Her exercise prescription was lowered to the initial prescription after all assessments were re-measured. As of Feb 2, she has attended 100 percent of the exercise sessions without incident or hospital re-admittance. Physical outcomes are contained in the table below. Quality of life measures will continue to be evaluated.

	August 2014	February 2015
Height (in):	62	62
Weight (lbs):	117	115
Blood Pressure (mmHg):	140/58	132/62
Heart Rate (bpm):	94	107
ECG:	NSR	NSR
SaO ₂ (%):	95 (w/o O ₂)	< 88 (w/o O ₂); 96 (w/ O ₂)
6 minute walk distance (m):	218	251