

# The Impact of Cardiac Rehabilitation on Depression Scores Using the PHQ-9

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## INTRODUCTION

Approximately 9.5% of all adults in the United States suffer from depression<sup>1</sup>. Approximately 15 to 20% of patients with heart disease also have depression<sup>2</sup>. Patients who have heart disease and depression have 3 times the mortality risk of healthy, age-matched controls<sup>3</sup>. Screening for depression in the cardiac rehab (CR) setting is important to identify patients that may require additional interventions related to depression.

## PURPOSE

The purpose of this study was to determine the impact of CR on depression scores as measured by the Patient Health Questionnaire (PHQ-9).

## METHODS

Data was collected on 1,838 patients from CR programs participating in the Montana Outcomes Project. Patients that completed both pre CR and post CR PHQ-9 surveys between July and September 2010 were included in the study. Mean pre CR PHQ-9 score was compared to the mean post CR PHQ-9 score.

## RESULTS

The mean pre CR PHQ-9 score was 5.12, (SD; 4.7) while mean post CR PHQ-9 score was 2.82, (SD; 3.6). The results of this analysis indicate that PHQ-9 depression scores dropped significantly ( $P < 0.01$ ) after completion of CR. Scores decreased from 5.12, indicating physicians use clinical judgment for treatment of depression, to 2.82 which indicates no recommended treatment.

## CONCLUSION

This study reveals that the average pre PHQ-9 score, reported by programs participating in the Montana Outcomes Project, indicated that patients entering CR may be candidates for medically supervised treatment of depression (PHQ-9 scores  $>4$ ). Mean post program evaluations elicited significant improvements in PHQ-9 scores and indicated that, on average, patients most likely are not candidates for the treatment of depression (PHQ-9 score  $<4$ ). Due to the high prevalence of depression in this population, CR programs should screen for depression on all patients entering Phase II CR.

## REFERENCES

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