Reviewer's report

Title: The relationship between depressive symptoms, health service consumption, and prognosis after acute myocardial infarction: a prospective cohort study.

Version: 1 Date: 28 May 2008

Reviewer: Kimberly Reid

Reviewer's report:

Review of manuscript: the relationship between depressive symptoms, health services consumption, and prognosis after acute myocardial infarction: a prospective cohort study.

In this manuscript the authors outline the effect of depression one month post-AMI on various health utilization measures and adverse outcomes. The results illustrate the higher consumption and adverse outcomes for depressed patients and this effect is more pronounced among patients with lower cardiac risk and higher functional capacity. This is a well written manuscript and the results are interesting and important.

Major Compulsory Revisions

1) Please provide more justification of depression measure modification and choice of depression measures. In particular,

a. Why were only 9 items of the BCDRS used to derive the primary depression measure used? Were the other 3 items not collected? If so, please discuss in manuscript. It seems that if all 12 items were collected this would be the correct measure to use since this is the measure that has been validated.

b. What is the justification for substituting 3 other depression items for the 3 BCDRS items not originally included? Which items were substituted?

c. I found cut-off point of 6 for original BCDRS scale from original validation study but could not find justification for other cut-points chosen for modified 12 item scale, 9 item scale, or GUSTO measure.

d. Please clarify which depression measure was used as the primary definition for this manuscript. I had a difficult time finding this (found in footnote of table).

e. Is it possible no association with mortality was found because the original BCDRS scale was changed?

f. I would like to see the analysis broken out by Risk level for other depression measures in addition to the primary depression measure instead of just the overall analysis, since this is the main message of the manuscript.

2) Please provide discrimination of GRACE and DASI in your cohort.

3) Multivariable regression models should take into account clustering of patients
within hospital, as patient care can vary greatly from between institutions of care. This can be done using stratification by hospital, hierarchical modeling or GEE (generalized estimating equations).

4) Clarify which regression models were used for which outcomes.
5) I appreciate that missing data was addressed. Please provide more information on variables in imputation model. If GUSTO and available BCDRS items were used to impute missing BCDRS depression measures this should be highlighted as a strength in the manuscript given the strong association between the measures. Specify number of imputation datasets.

Discretionary Revisions
1) If depression increases health seeking behavior then wouldn’t we expect to see an increase in ER visits?
2) Is it fair to call the GUSTO a depression scale given the weak association with BCDRS?
3) Why did the chart reviews go so far back in time? If these patients were hospitalized for AMI the current chart documentation of cardiovascular risk factors and co-morbid diseases should be available. Some of these conditions may change over time.
4) Why wasn’t race included as a covariate in the multivariable models?

Minor Essential Revisions
1) Typo in reference 14 ‘hop fracture’ instead of hip fracture.
2) Less vertical lines in forest plot would make it more readable. Suggest using reference line of 1 a dotted line and centering the plot a little more around 1. It would also be helpful if relative risks could be listed to the right of each forest plot line.
3) Multivariable modeling wording should instead be multivariate modeling.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests