Reviewer’s report

Title: Development of Mental Health Quality Indicators (MHQIs) for Inpatient Psychiatry based on the interRAI Mental Health Assessment.

Version: 1 Date: 28 November 2012

Reviewer: James Rohrer

Reviewer’s report:

I recommend acceptance but suggest some softening of the conclusions. My review is pasted below.

The authors have made extensive revisions in response to comments. The result has been enlightening, though perhaps in the manner in which they intended. First, I should say I am not a psychologist but might be described as a managerial epidemiologist. This has certain implications for my comments.

Convergent and discriminant validity are less convincing to me than predictive validity. When looking two data sets leads to the same conclusions, the accuracy of the measures seems to be supported. I am not sure this ‘convergence’ fits the definition of convergent validity, however. Psychometric terminology is not my arena so I will not worry about that issue.

Dichotomized dependent variables are commonly used as quality indicators so that is fine with me.

Quality indicators roughly fall into two groups: process and outcome. Outcome indicators typically are validated by testing their association with good clinical processes. Outcome indicators chronologically follow treatment; they are assessed toward the end of the episode. Change in cognition and depression symptoms would be outcome measures but the use of restraints would be appear to be a process measure.

The authors report substantial variation in indicators among sites. They seem to think variation supports the accuracy of the indicators. However, it could just as easily indicate a lot of random noise in the measures.

Predictive validity is tested by the association with the case mix severity variable. The odds of change in clinical symptoms or use of restraints should be related to case mix if the case mix variable is valid. The authors make a good case that the case mix measure is valid and this means it can be used to test the validity of the proposed quality indicators as well as for adjusting the quality indicators. The authors report that case mix severity is related to improvement in cognition and use of restraints but not to depression. This tells me that only two of their indicators are demonstrated to be valid.

The authors seem to leap ahead to the conclusion that the quality indicators are valid and can be used to identify good clinical processes. This is perhaps too
sanguine, since only one of the two outcomes measures demonstrated predictive validity. Recommending that the use of the indicators should proceed cautiously is more in keeping with your evidence. In addition, the two quality indicators supported by your evidence (change in cognition and use of restraints) should be adjusted for case mix severity when used to monitor quality. Recommending further development of severity adjustment methods is good, but at this juncture managers should use what they have available.