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Psychometric Evaluation of the Care Transition Measures in a sample of ACS patients: Results from Transitions, Risks, and Actions in Coronary Events – Center for Outcomes Research and Education (TRACE-CORE)

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Background: Quality of transitional care is associated with important health outcomes such as rehospitalization and costs. A widely used measure of the construct, the Care Transitions Measure (CTM-15), was developed with classical test theory approach. Its short version (CTM-3) was included in the CAHPS® Hospital Survey.
Methods: As part of TRACE-CORE 1545 participants were interviewed during hospitalization for ACS providing information on general health status (SF-36). At 1 month post-discharge, patients completed CTM-15, health utilization and care process questions. We evaluated the psychometric properties of the CTM using classical and item response theory analyses. We compared the measurement precision of CTM-15, CTM-3, and a CTM-IRT based score using relative validity (RV).
Results: Participants were 79% non-Hispanic white, 67% male, 27% with a college education or higher (27%) and average age of 62 years. The CTM scale had good internal consistency (Cronbach's alpha=0.95), but demonstrated strong acquiescence bias (8.7% participants responded "Strongly agree", 19% "Agree" to all 15 items) and limited score variability. IRT based item parameters were estimated for all items. The CTM-15 differentiated between groups of patients defined by self-reported health status, health care utilization, and care transition process indicators. Differences between groups were small (2-3 points). There was no gain in measurement precision for the scale from IRT scoring. The CTM-3 was not significantly lower for patients reporting rehospitalization or emergency department visits.
Conclusion: We identified psychometric challenges of the CTM, which may limit its value in research and practice. The strong acquiescence bias in the measure leads to highly skewed, clustered scores with restricted score variance. In the absence of guidelines on meaningfully important differences, it is hard to determine whether detected statistically significant differences in CTM are important. These results are in line with emerging evidence of gaps in the validity of the measure.