CBE ID

0430

Title

Change in Daily Activity Function as Measured by the AM-PAC:

Project

Patient Experience and Function

Endorsement Status

Endorsement Removed

Is Under Review

No

Previous Endorsement Cycle

Fall 2017

Removal Date

Tue, 10/23/2018 - 20:00

Initial Endorsement

Wed, 07/30/2008 - 20:00

Steward

CREcare

1.0 New or Maintenance

Maintenance

1.1 Measure Structure

Single Measure

1.3 Electronic Clinical Quality Measure (eCQM)

No

1.6 Measure Description

The Activity Measure for Post Acute Care (AM-PAC) is a functional status assessment instrument developed specifically for use in facility and community dwelling post acute care (PAC) patients. It was built using Item Response Theory (IRT) methods to achieve feasible, practical, and precise measurement of functional status (Hambleton 2000, Hambleton 2005). Based on factor analytic work and IRT analyses, a Daily Activity domain has been identified which consists of functional tasks that cover in the following areas: feeding, meal preparation, hygiene, grooming, and dressing (Haley, 2004, 2004a, 2004b).

The AM-PAC adaptive short form (ASF) versions of the Daily Activity scale are being submitted to

The National Quality Forum. The ASF version of the Daily Activity scale consists of 2 different 10-item forms, one for inpatients versus those receiving care in a community setting. Built using IRT methods, the Daily Activity ASFs allow different questions to be targeted to each setting (inpatient/community), generating an interval level score that is common across both ASFs. The scale is transformed from a logit scale to a standardized scale which ranges from 0 - 100 where 100 is the best possible daily activity function. We believe that these short forms are the best compromise between needed breadth of functional content across inpatient and community functional tasks, and the need to minimize response burden.

The ASFs for Daily Activity were built from an item bank that contains a rich assortment of 88 calibrated items that have been developed, tested, and applied in clinical research over the past seven years. In developing and evaluating the AM-PAC, we employed two different samples of 1,081 patients who received post acute care in acute inpatient rehabilitation units, long-term care hospitals, skilled nursing homes, home health care, and outpatient therapy care settings. The ASFs were developed on an initial sample of 485 post acute care patients (see Coster et al., 2004).

The existence of a detailed item bank enables the basic AM-PAC forms to be enhanced and improved in a very timely fashion (Jette et al., 2007; Haley et al., 2008 for examples of this process).

Scoring estimates from the ASFs and the computer adaptive test (CAT) are directly comparable, given they are taken from the same item bank, the same IRT analysis and use the same scoring metric. Using computer simulations with the AM-PAC item bank, we demonstrated excellent scoring comparability between the AM-PAC adaptive short forms and the CAT (Haley et al., 2004).

Advantages of using the CAT over the short forms include: less test burden on patients, decreased standard errors around score estimates, and improved scoring accuracy at the lower and higher ends of the AM-PAC functional scales (Haley et al., 2004). However, the ASFs can generate sufficiently accurate scores on the AM-PAC Daily Activity domains and those scores can be directly compared to scores provided from a CAT application of the same item pool.

Coster WJ, Haley SM, Andres PL, Ludlow LH, Bond TLY, Ni PS (2004). Refining the conceptual basis for rehabilitation outcome measurement: personal care and instrumental activities domain. Medical Care 42(Suppl 1):I-62.

Cella D, Gershon R, Lai J-S, Choi S. The future of outcomes measurement:item banking, tailored short forms, and computerized adaptive assessment. Qual Life Res. 2007;16:133-141.

Haley SM, Coster WJ, Andres PL, et al. Score comparability of short-forms and computerized adaptive testing: simulation study with the Activity Measure for Post-Acute Care (AM-PAC). Arch Phys Med Rehabil. 2004;85:661-666.

Jette AM,Haley SM. Contemporary measurement techniques for rehabilitation outcome assessment. Journal of Rehabilitation Medicine 2005; 37: 339-345.

Haley SM, Coster WJ, Andres PL, Ludlow LH, Bond T, Sinclair SJ, Jette AM. Activity outcome

measurement for post-acute care. Medical Care ; 42: Suppl. 1: I-49 – I-61, 2004.

Coster W, Haley S, Jette A: Measuring patient-reported outcomes after discharge from inpatient rehabilitation settings. J of Rehabilitation Medicine, 38:237-242, 2006.

Haley S, Ni P, Hambleton R, Slavin M, Jette A: Computer Adaptive Testing Improved Accuracy and Precision of Scores over Random Item Selection in a Physical Functioning Item Bank. J Clin Epidem, 59: 1174-1182, 2006.

Haley SM, Ni P, Jette AM, Tao W, Moed R, Meyers D, Zurek M. Ludlow LH. Replenishing a Computerized Adaptive Test (CAT) of Patient Reported Outcomes. In press,Quality of Life Research 2008).

Cella, D., Gershon, R., Lai, J.-S., & Choi, S. (2007). The future of utcomesmeasurement:Item banking, tailored short forms, and computerized adaptive assessment. Quality of Life Research, 16, 133-141.

Tao W, Haley SM, Coster WJ, Ni P, Jette AM. An exploratory analysis of functional staging using an Item Response Theory approach. Archives of Physical Medicine & Rehabilitation, in press 2008.

Jette A, Haley S, Tao W, Ni P, Meyers D, Zurek M: Prospective evaluation of the AM-PAC-CAT in outpatient rehabilitation settings. PHYSICAL THERAPY. 87(4): 385-398, 2007.

Jette A, Tao W, Norweg A, Haley S: Interpreting rehabilitation outcome measurements. J of Rehabilitation Medicine, 39(8):585-90,2007.

1.7 Measure Type

Outcome

1.8 Level of Analysis

Clinician: Individual, Facility

1.9 Care Setting

Home Care, Inpatient/Hospital, Outpatient Services, Post-Acute Care

1.14 Numerator

The number (or proportion) of a clinician's patients in a particular risk adjusted diagnostic category who meet a target threshold of improvement in Daily Activity (i.e., ADL and IADL) functioning. We recommend that the target threshold is based on the percentage of patients who exceed one or more Minimal Detectable Change (MDC) thresholds. The percentage threshold is derived from a normative database used for benchmarking. MDC is considered the minimal amount of change that is not likely to be due to measurement error. It is one of the more common change indices, which can be used to identify reliable changes in an outcome like Daily Activity function adjusting for the amount of measurement error inherent in the measurement. MDC can be reported at different confidence levels (see Haley & Fragala,

2006)._____Haley SM, Fragala-Pinkham MA. Interpreting change scores of tests and measures used in physical therapy. Physical Therapy 2006; 86(5): 735-743.

1.15 Denominator

All patients in a risk adjusted diagnostic category with a Daily Activity goal for an episode of care. Cases to be included in the denominator could be identified based on ICD-9 codes or alternatively, based on CPT codes relevant to treatment goals focused on Daily Activity function.

1.20 Types of Data Sources

Other

6.1.2 Current or Planned Use(s)

Public Reporting, Quality Improvement (Internal to the specific organization)

6.1.3 Current Use(s)

Public Reporting, Quality Improvement (Internal to the specific organization)

Exclusions

Those patients who did not have one or more mobility function goals for the episode of care.

Planned Use

Public Reporting, Quality Improvement (Internal to the specific organization)

Risk Adjustment

Statistical risk model

Target Population

Elderly

Use In Federal Program

Home Health Value-Based Purchasing Program

Steward Organization

CREcare

Steward POC email

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