**Methods for therapy effectiveness evaluation and provider profiling**

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**ABSTRACT**

**Background**: CMS implemented the first mandatory claims-based FS data collection strategy for outpatient therapy services in 2013. Data from this reporting system, which uses G code severity modifiers, could be utilized to evaluate treatment effectiveness, quality of care and develop value based purchasing strategies. Quality of data collected under CMS’s system may be inadequate for this purpose and a data system such as FOTO’s may be better suited for this purpose.

**Purpose:** Our overall purpose is to advance methodology for estimating therapy effectiveness evaluation and provider profiling. We will: 1) determine sensitivity to change of the CMS 7-level severity modifiers in relation to changes in the FOTO FS scores; 2) compare clinic quality profiles developed using G code severity rating to those developed using FOTO outcomes; and examine how clinic quality profiles vary by patient impairment.

**Methods:** A secondary analysis of FOTO data from patients with Medicare Part B insurance ( July 1 2013 - June 30, 2014) will be performed. The proportion of patients who have changed FS during therapy will be calculated utilizing G code severity modifiers and FOTO FS measures. The two classification methods will be compared. Three-level hierarchical regression models will be constructed to estimate overall clinic quality profiles using FOTO FS measures. Models will include covariates for risk-adjustment and inverse probability weighting. Separate analyses per body part

specific FS measure will be performed. The same procedure using 3-level hierarchical ordinal logit models will be used to construct models using G code severity modifiers. Clinic random effects showing clinic quality ranking by patient impairment group will be plotted and, correlation coefficients between rankings compared. Clinic ranking from models utilizing FOTO CATs and G code severity modifiers will be compared.

**Clinical Implications**: It is crucial to advance quality assessment methods using FS outcomes to inform payment policies. The introduction of mandatory claims-based FS reporting is a first step in obtaining outcomes data for quality assessment. However, the elements required under the new CMS mandatory reporting system are limited, potentially undermining their usefulness for evaluating quality. This proposal will provide empirical evidence to inform future policy.