NQF 0428 GENERAL ORTHOPEDIC MEASURE SPECIFICATIONS

Measure Type:

Patient Reported Outcome Measure (PROM) which is used as the basis for a Patient-Reported Outcome Performance Measure (PRO-PM)

Measure Title:

Functional status change for patients with General orthopedic impairments

Brief description of measure:

A self-report outcome measure of functional status for patients 14 years+ with general orthopedic impairments.. The change in functional status assessed using FOTO (general orthopedic) PROM is adjusted to patient characteristics known to be associated with functional status outcomes (risk adjusted) and used as a performance measure at the patient level, at the individual clinician, and at the clinic level by to assess quality

Numerator Statement:

The outcome being measured is the change in functional status on three levels:

- Patient Level: The residual functional status score for the individual patient (residual scores are the actual change scores - predicted change after risk adjustment).
- Individual Clinician Level: The average of residuals in functional status scores in patients who were treated by a clinician in a 12 month time period for general orthopedic impairment.
- Clinic Level: The average of residuals in functional status scores in patients who were treated by a clinic in a 12 month time period for general orthopedic impairment.

Time Period for Data:

Both Numerator and denominator aggregate the past 12 months of data

Numerator Details:

- Patient Level: The residual score for the individual patients with general orthopedic impairments is derived by applying the statistical risk adjustment model described below and applying steps 1-5 as described below. The risk-adjusted scores can be applied to evaluate performance at the patient level using the methods described below.

- Individual Clinician Level: The average of residuals in functional status scores in patients who were treated by a clinician in a 12 month time period for general orthopedic impairment. Average scores are calculated using data from all clinicians, however performance is evaluated only for those clinicians that had a minimum of 10 patients in the previous 12 months to maximize stability of the benchmarking estimates. In 2011-2013, FOTO used a standard threshold of 40 patients/clinician regardless of clinic size, but has recently changed its procedure to enable participation by clinicians that do not have a sufficient volume of patients. The score is derived by applying steps 1-6 as described below.
- Clinic Level: The average of residuals in functional status scores in patients who were treated by a clinic in a 12 month time period for general orthopedic impairment. Average scores are calculated using data from all clinics, however performance is evaluated only for large clinics (5 or more clinicians) that had a minimum of 40 patients, and small clinics (1-4 clinicians) that had a minimum of 10 patients per clinician, in the previous 12 months to maximize stability of the benchmarking estimates. In 2011-2013, FOTO used a standard threshold of 40 patients/clinics regardless of clinic size, but has recently changed its procedure to enable participation by smaller clinics that do not have a sufficient volume of patients. The score is derived by applying steps 1-6 as described below.

Both comparative benchmark reports (i.e., scale ranging from 0 to 100 with higher scores meaning higher functional abilities) at the clinician or clinic level include patients with general orthopedic impairments, who were treated in therapy and had their functional status assessed at the end of their episode of therapy and were discharged from therapy.

Denominator Statement:

All patients 14 years and older with general orthopedic impairments who have initiated rehabilitation treatment and completed the FOTO (general orthopedic) PROM.

Denominator Details:

The established ICD-9-CM codes for the neck, cranium, mandible, thoracic spine, ribs or other general orthopedic impairment include:

Diagnosis specific to the cervical spine:

333.83, 353.2, 716.58, 718.88, 718.98, 719.08, 719.18, 719.48, 719.58, 719.68, 721.0, 721.1, 722.0, 722.4, 722.71, 722.81, 722.91, *723, 730.08, 730.09, 730.18, 739.1, 741.01, 741.91, 754.1, *805.0, *805.1, *806.0, *806.1, 847.0, *952.0, 953.0

* Use of an asterisk is to include all codes in the category

Diagnosis specific to the thoracic spine:

353.3, 721.2, 721.41, 722.11, 722.31, 722.51, 722.72, 722.82, 722.92, 724.01, 724.1, 724.4, 724.5, 730.08, 730.09, 730.18, 739.2, 741.02, 741.92, 805.2, 805.3, *806.2, *806.3, 847.1, *952.1, 953.1

* Use of an asterisk is to include all codes in the category

Diagnosis specific to the Cranium and Mandible

307.81, *346, *350.2, *351, *524.6, 754.0, 784.0, *830, 848.1

* Use of an asterisk is to include all codes in the category

Diagnosis specific to the Ribs

733.6, 739.8, 756.2, 756.3, *786.5, *807.0, *807.1, 807.2, 807.3, 839.61, 848.3, *848.4, 922.1, 922.3

* Use of an asterisk is to include all codes in the category

Diagnosis not specific to the cervical or thoracic spine, cranium/mandible or ribs, but effect the function of the cervical or thoracic spine, cranium/mandible, ribs or other general impairment:

338.29, 353.0, 353.8, 710.0, 711.98, 714.0, 715.09, 715.18, 715.19, 715.28, 715.38, 715.88, 715.89, 715.98, 716.98, 716.99, 716.59, 716.98, 716.99, 718.08, 718.09, 718.19, 718.28, 718.29, 718.38, 718.39, 719.49, 719.59, 718.89, 718.99, 720.0, 720.9, *721.9, 722.2, 722.6, 724.00, 724.09, 724.08, 724.5, 724.9, 728.2, 728.85, 728.87, 730.19, 732.0, *733.0, 733.13, 733.90, *737, 754.2, 756.19, 759.79, 781.92, 847.9, 952.8, V54.17, V54.89, V57.1, V59.49, V67.0

* Use of an asterisk is to include all codes in the category

"[The ICD 10 Crosswalk can be seen at this link](#)"

Denominator Exclusions:

- Patients who are not being treated for a general orthopedic impairment
- Age under 14 years old.

Risk Adjustment Type, model method and variables:

The change in functional status assessed using FOTO (general orthopedic) PROM is risk adjusted using a multivariate linear regression model that includes the following independent variables: intake functional status, age, symptom acuity, surgical history, payer source, gender, fear-avoidance beliefs of physical activities and number of functional comorbidities. The public domain short form and internet CAT produce a measure that can be risk adjusted.

Detailed risk model specifications:

The coefficients for the risk adjustment are available in this link: {{cta('df5aa91e-796f-4085-ba53-341e85b015c3')}}

Type of score:

Continuous variable

Interpretation of Score:

Better quality (higher effectiveness) = higher score

Calculation Algorithm/Measure Logic:

STEPS TAKEN TO PRODUCE THIS MEASURE:

Definitions:

Patient's Functional Status Score A functional status score is produced when the patient completes the FOTO (general orthopedic) PROM administered by internet or a paper and pencil survey. The functional status score is continuous and linear. Scores range from 0 (low function) to 100 (high function). The survey is standardized, and the scores are validated for the measurement of function for this population.

Patient's Functional Status Change Score. A functional status change score is calculated by subtracting the Patient's Functional Status Score at Admission from the Patient's Functional Status Score at Discharge.

Predicted Functional Status Change Score. Functional Status Change Scores for patients are risk adjusted using multiple linear regression methods that include the following independent variables: Patient's Functional Status Score at Admission, patient age, symptom acuity, surgical history, gender, number of co morbidities, payer type, and level of fear-avoidance. The Patient's Functional Status Change Score is the dependent variable. The statistical regression produces a Risk-Adjusted Predicted Functional Status Change Score.

Risk-adjusted Functional Status Change Residual Score. The difference between the actual change and predicted change scores (after risk adjustment) is the residual score and should be interpreted as the unit of functional status change different than predicted given the risk-adjustment variables of the patient being treated. As such, the risk-adjusted residual change score represents risk-adjusted change corrected for patient characteristics. Risk-adjusted residual change scores of zero (0) or greater (>0) should be interpreted as functional status change scores that were predicted or better than predicted given the risk-adjustment variables of the patient, and risk-adjusted residual change scores less than zero (<0) should be interpreted as functional status change scores that were less than predicted given

the risk-adjustment variables of the patient. Aggregated risk-adjusted residual scores allow meaningful comparisons amongst clinicians or clinics.

STEPS:

First, the patient completes FOTO (general orthopedic) PROM at Admission, which generates the Patient's Functional Status Score at Admission.

Second, patient completes FOTO (general orthopedic) PROM at or near Discharge, which generates the Patient's Functional Status Score at Discharge

Third, the Patient's Functional Status Change Score (raw, non-risk-adjusted) is generated

Fourth, a Risk-adjusted Predicted Functional Status Change Score is generated using a regression equation

Fifth, Functional Status Change Residual Score after risk adjustment is generated for each patient.

Sixth, the average residual scores per clinician and/or clinic are calculated, and scores for all clinicians/clinics in the database are ranked. The quality score is the percentile of the clinician and/or clinic ranking. The quality scores and its 95% CI can be compared to the benchmark (a score of zero) to determine if the performance is below, at, or above the predicted average. FOTO recommends that clinicians have a minimum of 10 patients/year and clinics have a minimum of 10 patients/therapist per year for small clinics or 40 patients per year for larger clinics (5 or more clinicians) in order to obtain stable estimates of provider performance.