

## ***Supplemental Materials: Measure 700***

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## AACVPR Outpatient Pulmonary Rehabilitation Registry Data

### Elements *Updated July 2015*

The following is a list of data elements contained in the Registry. Please note that this list is subject to change. Participating members will be notified if there are any major changes to this list.

#### Demographic Information

Registry ID (system)  
Record creation date (system)  
Program ID (system)  
\* Hospital medical record ID  
\* Last name  
Gender  
\* DOB  
  
Health insurance plan  
Health insurer(s)  
Race  
Ethnicity  
ZIP Code  
Education level  
Social support/living arrangement

#### Medical History Information

PR admission diagnoses  
Comorbid conditions  
Revised Charlson Comorbidity Index  
(calculated)  
Tobacco use status:  
Packs/day  
Years of use  
Pack-year history (calculated)  
Quit date

#### PR Intake Information

\* Referral date  
\* Enrollment date  
Age at enrollment (calculated)  
# of prescribed sessions/week  
# of education sessions  
# of exercise sessions

#### Pre/Post Clinical Assessments

Height  
Weight  
BMI (calculated)  
Fat-free mass/method used  
BODE Index (calculated)

#### Spirometry

FEV<sub>1</sub> (actual, % predicted)  
FVC (actual, % predicted)  
FEV<sub>1</sub>:FVC (ratio, entered in the form of a number to the nearest 2 decimal points.)  
DLCO (actual, % predicted)  
FRC (actual, % predicted) Obstruction/restriction and severity  
RV % Predicted  
TLC % Predicted  
RV/TLC % Predicted  
IC/TLC % Predicted

#### Functional Capacity Measures

6-Minute Walk Test parameters:

Distance (feet/meters)  
Test type  
METs (calculated)  
Borg Rating of Perceived Exertion  
Borg Dyspnea Rating  
MET-mins per week (IPAQ)

#### Supported Assessment Tools<sup>#</sup>

##### Dyspnea Symptoms

Modified Medical Research Council  
Dyspnea Scale  
Baseline Dyspnea Index/Transitional Dyspnea Index  
UCSD Shortness of Breath Questionnaire

##### Depression/Psychosocial Risk

Center for Epidemiologic Studies-Depression Patient Questionnaire  
Psychosocial Risk Factor Survey  
Hospital Anxiety and Depression Scale  
Geriatric Depression Scale (15- or 30-point)  
Beck Depression Inventory II

##### Health-related Quality of Life

Chronic Respiratory Disease Questionnaire  
St. Georges Respiratory Questionnaire  
Medical Outcomes Trust-Short Form 36-v2  
(Standard)  
Ferrans & Powers Quality of Life Index-  
Pulmonary  
Dartmouth COOP  
COPD Assessment Test

### **Oxygen Usage**

Nasal cannula and/or mask usage at rest,  
ADLs, exercise, and sleep  
Oxygen percent at rest, ADLs, exercise, and  
sleep (for mask usage)  
Oxygen delivery system used

### **Healthcare Utilization**

Exacerbations  
Adverse events  
Measure of 30 Day Readmission for COPD

### **Physical Activity**

Patient Steps per Day

### **Discharge information**

Completion status  
Non-completion reasons  
Program discharge date  
Number of exercise sessions completed

### **Information Relating to Participating Program**

Health Care System (HCS) ID (System)	Referrals/year
Health Care System Name	*Hospital bed number
HCS address	Profit status of hospital/clinic
HCS city	Maintenance program offered
HCS state	Number of full-time staff equivalents
HCS ZIP code	*Principal User name
	*Principal User telephone number
*Participating program name	*Principal User e-mail address
*Address	*Program Director name
*City	*Medical Director name
*State	*AACVPR certified/date of certification
*ZIP code	
*Type of program	

#### **\* "Required" fields**

**# Fields will be provided for scores. AACVPR will not provide actual tools. Program may choose one or more tools for assessment purposes.**

**Note: Some of the definitions for the above data elements are unique and have been standardized specifically for the Registry. They may be different than what you are currently using. The definitions and timing of data collection will be reviewed during the Principal User training sessions.**



## AACVPR Outpatient Pulmonary Rehabilitation Registry: Definitions and Comments for Selected Data Elements

To ensure consistency in the data entered, definitions of several of the data elements in the AACVPR Outpatient Pulmonary Rehabilitation Registry have been standardized. All data entered must conform to these definitions.

Please note the following:

1. We strongly recommend that patients have monitoring of the following outcomes pre and post (and ideally in follow-up):
  - a. Functional capacity using 6 minute walk test (6MWT) (see the [PR Outcomes Toolkit](#) for resources and competency).
  - b. Maximum dyspnea during 6MWT
  - c. Health-related Quality of life (HRQOL) using one of the six tools identified (Chronic Respiratory Questionnaire and St. George Respiratory Questionnaire have the strongest evidence base in PR.)
  - d. Depression or anxiety using one of the six tools identified
2. If you do not have data for a value, leave the field blank.
3. A zero means zero. Do not enter a zero into a field unless the value is truly zero.
4. For some clinical and functional assessments, be sure to select the appropriate units, e.g., feet/meters or pounds/kilograms, for the reported.

Regarding the symptom, QOL, and psychosocial tools, only one tool needs to be entered. It is not necessary to use all the tools displayed.

The data elements are listed in the order they may be encountered while moving through the patient record.

<b>Referral Date</b>	Enter the date the referral document was <i>signed by a physician</i> . For patients referred from an inpatient care team, this may be the date of the discharge orders.
<b>Enrolled</b>	If the patient has been referred for PR and enrolls (defined as having completed at least 1 billable exercise session) select “Yes” from the pulldown list and enter the date of the first session under the Enrollment Date. If the patient was referred but did not start, select “No”, leave the Enrollment Date blank and select a primary reason for non-enrollment from the Reason for Non-enrollment field.
<b>Enrollment Date</b>	Enter the date of the patient’s first <i>billable exercise session</i> . An evaluation without exercise would not meet this criterion.
<b>Admitting / Respiratory Diagnosis</b>	Enter the diagnoses or procedures most related to the referral to PR as well as any secondary pulmonary diagnoses including past medical history. Enter all that apply and select a diagnosis/procedure as the primary diagnosis.
<b>Most Recent Hospitalization for COPD:</b>	<p>For pulmonary procedures such as lung transplantation, enter the date of the hospital admission.</p> <p>Enter the date of the <i>most recent</i> hospitalization for COPD. If the exact day and month are unknown, enter “01/01/year”. This date and any readmissions during PR participation are used to evaluate for 30-day readmission rates.</p>
<b>FEV1/FVC Ratio</b>	This is the actual ratio, e.g. FEV1 divided by FVC to give a ratio of the two values. Entries should be in the form of a number to the nearest 2 decimal points.

<b>Severity of Obstruction</b>	<p>Use GOLD guidelines for severity based on airflow obstruction, i.e.,</p> <p>mild &gt; 80% predicted</p> <p>moderate 50-80% predicted</p> <p>severe 30-50% predicted</p> <p>very severe &lt; 30% predicted (or 30-50% with chronic respiratory failure)</p> <p><b><u>All include FEV1 /FVC ratio &lt; 70% predicted</u></b></p>
<b>Post-bronchodilator (pre-PB value if post value not available) Pulmonary Function Testing</b>	Use the values from the most recent test date available.
<b>Clinical Outcomes</b>	<p>Enter values (scores) for tests used for dyspnea (Maximum Borg with 6MWT, MMRC, and UCSD SOBQ, if used), health-related quality of life, and psychosocial (depression and/or anxiety) tools. If tool uses domains or subscales, enter these values. Please refer to the <a href="#">Pulmonary Rehabilitation Outcomes Resource Guide</a> for further information on the tools listed in the registry.</p>
<b>Steps per Day:</b>	Enter the average number of steps taken per day as recorded on a pedometer, accelerometer or other validated physical activity monitor.
<b>Tobacco Status</b>	<p>If the patient has never used tobacco products, select the “Never smoker” option. If the patient has quit using tobacco products by the time of PR enrollment, select the “Former smoker” option. If the patient is actively using tobacco products at the time of enrollment, select the “Current smoker” option, indicating whether he/she is smoking “Every day” or “Some days.” If the patient is using tobacco products, but it is not clear how often, select the “Smoker, current status unknown” option.</p> <p>If the patient is currently smoking cigars, leave the “Packs per day” field blank and enter the number of years the patient has smoked cigars.</p>
<b>Tobacco Status (DC/FU)</b>	If the patient has not used tobacco products within the past seven (7) days, enter “Abstaining.” If the patient has used tobacco products within the past seven (7) days, enter “Not Abstaining.”
<b>Medication</b>	<p><b>Long-acting beta agonists</b> (long-acting beta<sub>2</sub> agonists, long acting β<sub>2</sub>-agonists, LABA) trigger smooth muscle relaxation resulting in dilation of bronchial passages with a long duration of action due to the addition of a long, lipophilic side-chain that binds to an exosite on adrenergic receptors. This allows the active portion of the molecule to continuously bind and unbind at beta<sub>2</sub> receptors in the smooth muscle in the lungs. This class may reduce the need for shorter-acting β<sub>2</sub>-agonists. Long-acting beta<sub>2</sub> agonists with 12-hour duration of action include salmeterol (Serevent, combined with fluticasone in Advair), formoterol (Foradil, combined with budesonide in Symbicort and mometsone in Dulera), and arformoterol (a nebulized medicine available under the brand name Brovana). Long-acting beta<sub>2</sub> agonists with 24-hour duration of action include indacaterol (Arcapta) and vilanterol (combined with fluticasone in Breo Ellipta).</p> <p><b>Short-acting beta agonists</b> (beta<sub>2</sub> receptor agonists, SABA) trigger smooth muscle relaxation, resulting in dilation of bronchial passages. This class of drugs is often used for “rescue” or rapid relief of respiratory symptoms including dyspnea and exercise-induced bronchospasm. Examples include albuterol (salbutamol outside the United States; brand names in the United States include Ventolin, Proventil, and ProAir), levalbuterol (Xopenex), and pirbuterol (Maxair). Albuterol is available in both metered dose inhaler and nebulizer solution.</p>

**Long-acting anticholinergics** (LAAC) relax and dilate the airways to control dyspnea and reduce bronchospasm. They also may reduce mucus production. Examples include tiotropium (Spiriva), a LAAC which also reduces acute exacerbation of COPD and improves exercise capacity. Duration of action is 24 hours or longer. Tudorza Pressair (aclidinium bromide) is a LAAC used twice daily for the long-term maintenance treatment of bronchospasm in COPD.

**Short-acting anticholinergics** (muscarinic antagonist, SAAC) relax and dilate the airways to improve dyspnea and reduce bronchospasm. They also may reduce mucus production. Ipratropium (Atrovent) is available in inhaler and nebulizer solution (also combined with albuterol in Combivent Respimat and Duoneb nebulizer solution). Duration of action is typically 4 to 6 hours.

**Inhaled corticosteroids** (glucocorticosteroids, ICS) treat and prevent inflammation in the airway with minimal amounts absorbed into the body, thereby reducing systemic side effects. Examples are listed below.

Generic Name	Brand Name
beclomethasone	QVAR
budesonide	Pulmicort
ciclesonide	Alvesco
fluticasone	Flovent
mometasone	Asmanex

Combinations of an inhaled corticosteroid and a long-acting beta2-agonist include:

Generic Name	Brand Name
budesonide and formoterol	Symbicort
fluticasone and salmeterol	Advair
mometasone and formoterol	Dulera
fluticasone and vilanterol	Breo Ellipta

**Oral corticosteroids** (glucocorticosteroids) reduce inflammation and swelling in the airway and treat certain inflammatory diseases including significant allergic reactions, autoimmune disorders and risk of organ rejection following organ transplantation. Patients should be instructed in correct use and potential adverse effects. Uses in obstructive lung disease may include acute treatment of exacerbation or pneumonia. Examples of oral corticosteroids include prednisone, prednisolone, and methylprednisolone.

## Weight

Weigh the patient *prior to exercise* without shoes and while wearing his/her typical or usual exercise clothes. Record weight to the nearest half pound or kilogram if using a digital scale, to the nearest quarter pound if using a balance beam scale. The scale should be placed on a solid, level surface. Select the units used for measurement (pounds or kilograms).

## Height

Measure the patient's height in stocking feet to the nearest quarter inch or whole centimeter. Have the patient stand erect with the heels, buttocks, back of shoulders and back of head against the vertical scale. With the patient holding their breath, bring the horizontal bar into contact with the highest point on the head. Select the units used for

measurement (inches or centimeters).

M2, M4, M6 refer to tank size at 2, 4 and 6 hours at 2lpm.

**Oxygen Tank Size**

**6-Minute Walk Distance** Report the distance attained during the 6-minute walk test in feet or meters. (Please refer to An official European Respiratory Society/ American Thoracic Society technical standard: field walking tests in chronic respiratory disease Anne E. Holland, et al.

**Program Discharge Date** Enter the date of the last billed Phase 2 exercise session or discharge assessment session.

**Completion Status** The patient is defined as having completed PR when *he/she has undergone a final, formal discharge assessment session and updated treatment plan*. If neither of these criteria is met, the patient has not completed PR and reason(s) for non-completion should be entered.

**# of Sessions Completed** Enter the number of billed outpatient pulmonary rehab exercise sessions the patient completed.

**Untoward Events** Untoward events are events that require immediate cessation of exercise, assessment by PR staff, and intervention, e.g., immediate contact of physician, transport to emergency department, rapid response call, code blue, and/or other acute intervention. It is assumed that the physician will be contacted regarding the patient's findings and disposition. These are tracked and reported during the PR program.

**Exacerbation** Exacerbation is defined as an increase in or the new onset of more than one respiratory symptom (cough, sputum, sputum purulence, wheezing, or dyspnea) lasting three (3) days or more and requiring treatment with an antibiotic or a systemic corticosteroid. Exacerbations are reported during both PR and the follow-up period (six months from the start of PR).

## SECTION 3: HEALTH RELATED QUALITY OF LIFE

Test	Link, Basic Information	Provider Considerations, Price	Sensitivity, Validity, Reliability	Minimal Important Difference (MID)
<b>St. George's Respiratory Questionnaire (SGRQ)</b>	<p><a href="#"><u>St. George's Respiratory Questionnaire (SGRQ)</u></a></p> <p>The SGRQ was developed to measure health status in patients with respiratory disease, e.g. COPD or asthma (Jones P et al. 1992). Domains include symptoms (frequency and severity of respiratory symptoms), activity (effects on and adjustment of everyday activities), and impact on social and psychological functioning.</p> <p>Requests for SGRQ translations should be sent to Yvonne Forde: <a href="mailto:sgrq@sgul.ac.uk"><u>sgrq@sgul.ac.uk</u></a>.</p> <p>E-mail: <a href="mailto:pjones@sghms.ac.uk"><u>pjones@sghms.ac.uk</u></a></p>	<p>Widely used in clinical trials as a secondary endpoint to assess the effects of treatment, management and interventions on health status in COPD.</p> <p>Section I (symptoms) is a 5-point Likert scale. Sections II (activity) and III (impacts) are dichotomous (yes or no answers). Each item is weighted based on empirical data. Scores range from 0 - 100, with higher scores indicating poorer health. A missing answer is considered as if the patient had answered "no" (indicating better health status). (Jones P et al, 2002). The tool is self administered.</p> <p>The St. George's University of London Medical School grants permission for clinicians to use the SGRQ without charge. For details on how to obtain a license to use the SGRQ or for an electronic copy of the Excel-based scoring Calculator, please send an email to Yvonne Forde, email: <a href="mailto:sgrq@sgul.ac.uk"><u>sgrq@sgul.ac.uk</u></a></p> <p>The Medical School charges commercial organizations a license fee for use of the SGRQ.</p>	<p>Reliable and valid in COPD and asthma. A COPD-specific version (Meguro M et al. 2007) and IPF-specific version (Yorke et al. 2010) are available. Results may be influenced by subjects' sex, age, education, and co-morbidities (Ferrer M et al 2002).</p> <p>Linearity of differences between SGRQ values has not been shown, especially in different stages of severity (Schünemann H 2003). There is significant correlation between SGRQ and FEV<sub>1</sub>, FVC, resting SaO<sub>2</sub>, 6MWD, MRC, anxiety scores, and depression scores.</p> <p>The SGRQ demonstrated greater ability to discriminate among different levels of severity stages of COPD than generic measures of health (Dodd, et al., 2012).</p>	<p>MID of 4 is applied most often (Jones P 2002). Efficacy considered slight with a mean change of 4 units, moderate with a change of 8 units and very efficacious with a change of 12 units.</p> <p>Suitability of MID for individual patients vs. patient group comparisons unknown.</p>



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<b>Chronic Respiratory Disease Questionnaire (CRQ)</b>	<p><a href="#"><u>Chronic Respiratory Disease Questionnaire (CRQ)</u></a></p> <p>Tools include an interviewer lead CRQ (Guyatt G, et al 1987), a self report CRQ (Williams J, Singh S, Sewell L, Guyatt G, Morgan M. et al. 2001) and a standardized CRQ self report (Schünemann H, Griffith L, Jaeschke R, et al 2003).</p> <p>The tool measures physical-functional and emotional limitations due to chronic lung diseases, including COPD. It has been primarily applied in rehabilitation trials of COPD (Puhan M, et al. 2007).</p>	<p>The patient is asked to recall the five most important activities that caused breathlessness over past two weeks. A total score as well as individual subscale scores can be calculated. The tool is provider or self-administered; the domains include dyspnea, fatigue, emotion, and mastery and includes 20 items.</p> <p>The tools are licensed.</p> <p>Fees for interviewer and standardized self-administered tool range from \$150 to \$2000. Contact McMaster University <a href="mailto:aus-tinp@mcmaster.ca">aus-tinp@mcmaster.ca</a></p> <p>The CRQ – Self Report (Williams J, et al. 2001) is low cost (approximately £30) for use in the clinical setting or by prior arrangement, for non-pharmaceutical industry funded studies. Contact: <a href="mailto:Leslie.shortt@uhl-tr.nhs.uk">Leslie.shortt@uhl-tr.nhs.uk</a> or <a href="mailto:johanna.williams@uhl-tr.nhs.uk">johanna.williams@uhl-tr.nhs.uk</a></p>	<p>Sensitive to bronchodilator treatment. The tool has not yet been shown to be responsive to long-term disease progression.</p>	<p>MID of 0.5-1.0 has been used.</p> <p>(Schünemann H, et al, 2005). Self report tool should be scored by each domain (dyspnea, fatigue, emotion and mastery). The MID for each domain is 0.5.</p>
<b>COPD Assessment Test (CAT)</b>	<p>The 8-item questionnaire that uses a 6-point likert-type scale asking questions about cough, mucus congestion, chest tightness, exertional dyspnea, ADL limitation, confidence in leaving the home, sleep quality and energy level. It is scored from 0 to 40, with higher scores indicating greater levels of limitation.</p> <p>Instrument available at: <a href="http://www.catestonline.org/images/pdfs/CATest.pdf">http://www.catestonline.org/images/pdfs/CATest.pdf</a></p>	<p>The CAT has been initially validated in prospective studies conducted in the US, Europe and China, and is believed to be globally applicable.</p> <p>The CAT has been translated and validated for use in more than 50 languages other than English. Only validated translations of the CAT should be used.</p> <p>For further details on validated translations please visit <a href="http://www.CATestonline.org">www.CATestonline.org</a>.</p> <p>Health Professional User Guide available at: <a href="http://www.catestonline.org/images/UserGuides/CATHCPUser%20guideEn.pdf">http://www.catestonline.org/images/UserGuides/CATHCPUser%20guideEn.pdf</a></p>	<p>Sensitive to changes related to pulmonary rehabilitation reported by Dodd and colleagues (2011). In 2012, Dodd and colleagues reported the CAT score is immediately responsive to PR and remains improved at 6 months. No significant difference was noted in short and medium term changes in the CAT and CRQ-SR following PR.</p>	<p>No minimal clinically important difference yet reported in the literature (April 2014), however, Dodd (2011) reported a mean change of 2.9 (<math>\pm</math> 5.6) in CAT score pre- to post-PR.</p>

## SECTION 3: HEALTH RELATED QUALITY OF LIFE

Test	Link, Basic Information	Provider Considerations, Price	Sensitivity, Validity, Reliability	Minimal Important Difference (MID)
<b>Medical Outcomes Study Short Form-36 (SF-36)</b>	<p>Email: <a href="mailto:vhall@qualitymetric.com">vhall@qualitymetric.com</a> (Ware J, Sherbourne C., 1992)</p> <p>Generic health survey evaluating health and functional status in eight areas under three general categories: (1) functional status (physical functioning, social functioning and role limitations attributed to physical and emotional problems); (2) well-being (mental health, energy/fatigue and pain); and (3) general health perception.</p>	<p>Best-known health status questionnaire. Although the RAND-36 is an exact replica of the content of the SF-36®, the RAND uses different scoring algorithms for two of the 8 scales (Bodily Pain, General Health); results for the scales are not comparable with the standard SF-36®. Differences are largest for the Bodily Pain scale; RAND scores are five points or more higher for more than one-third of respondents. The SF-36® bibliography advises that the RAND-36 scoring does not meet scaling and scoring assumptions as well as the standard SF-36® scoring.</p> <p>Fees range from \$500 - \$1000. See <a href="http://www.qualitymetric.com">www.qualitymetric.com</a></p>	<p>The tool may lack sensitivity to change in evaluating PR. There may be inconsistently in response to therapeutic effects and less responsiveness than disease-specific instruments in COPD. It is discriminative, responsive to long term disease progression, easy to use, and validated in several languages. Valid, reliable and sensitive (Stewart A, Ware J 1992, Scott-Lennox J et al 1999, and Keller S et al 1999). Considered a valid screening measure for depressive symptoms.</p>	<p>No MID has been established. Five points has been considered, but a consensus paper questions this; 10-30 points has also been discussed as the MID.</p>
<b>Ferrans and Powers Quality of Life Index – Pulmonary Version III (QLI)</b>	<p>Ferrans and Powers Quality of Life Index—Pulmonary Version</p> <p>(Ferrans C, Powers M. 1992).</p> <p>The tool measures both satisfaction and importance of various aspects of life in patients with chronic lung disease.</p>	<p>Importance ratings are used to weigh satisfaction, with scores reflecting respondents' satisfaction with the aspects of life they value. Items are rated as more important have a greater impact on scores. Scores are calculated for quality of life overall and in the four dimensions of quality of life: health and functioning, socioeconomic, psychological / spiritual, and family. Requires a scoring tool or algorithm.</p> <p>Public domain</p>	<p>Studies evaluating the tool in chronic lung disease include McEntee D, Badenhop D 2000, Verrill D, Barton C, Beasley W. et al 2001. Internal consistency and reliability (total scale) are supported by Cronbach's alphas ranging from .73 to .99 across 48 studies. Convergent validity supported by strong correlations between the overall (total) QLI score and Campbell, Converse, and Rodgers' (1976) measure of life satisfaction (<math>r = .61, .65, .75, .77, .80, .83, .93</math>) Ferrans &amp; Powers 1985; Ferrans &amp; Powers, 1992, Ferrans 1990). Responsiveness to change (sensitivity) of the QLI has been demonstrated in 27 published intervention studies.</p>	<p>2 points (0-30 scale)</p>

## SECTION 3: HEALTH RELATED QUALITY OF LIFE

Test	Link, Basic Information	Provider Considerations, Price	Sensitivity, Validity, Reliability	Minimal Important Difference (MID)
<b>Dartmouth Primary Care Cooperative (COOP)</b>	<p>Dartmouth Primary Care Cooperative</p> <p>The COOP charts measure six core aspects of functional status:</p> <ul style="list-style-type: none"> <li>Physical fitness,</li> <li>Feelings,</li> <li>Daily activities,</li> <li>Social activities,</li> <li>Change in health and overall health.</li> </ul> <p>Pain can be included as an optional aspect.</p>	<p>Each chart consists of a title, a status question of the patient over past 2-4 weeks, and 5 response choices. Each response is illustrated by a drawing that depicts a level of functioning on well-being along a 5 point ordinal scale. High scores (i.e., patient rating of 4 or 5) represent unfavorable levels of health (life quality or social support) on each chart. A chart score of 4 or 5 should always be considered abnormal. Once abnormal scores are identified, the scores should be verified and reported.</p> <p>\$100.00 administration fee for the comprehensive packet with camera-ready charts.</p>	<p>The tool is reliable, valid and responsive quality of life tool for COPD. The individual items of the COOP have test-retest reliabilities of 0.67-0.78 (weighted kappa). Spearman's rank correlations between COOP single-item scores and corresponding EQ-5D range from 0.45 to 0.72. Four of the five COOP items do not discriminate between patient groups divided according to FEV<sub>1</sub> and 6MWD. The COOP chart system shows properties supporting construct validity. The items, however, did not discriminate well between known groups, indicating the tool is not very sensitive in COPD. The reliability is acceptable for use at group level, but lower than current recommendations for use in individual patients (Stavem K, Jodalén H. 2002).</p>	N/A