Updated 11/30/2017

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.

**Session Copay**
Enter a per session copay amount, if any, the patient pays for participation in PR. If there is no copay ($0 copay), please enter 0 into the field. If the copay is unknown, please leave the field blank.

**Referral Date**
Enter the date the referral document was *signed by a physician*. For patients referred from an inpatient care team, this may be the date of the discharge orders.

**Enrolled**
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.

**Enrollment Date**
Enter the date of the patient’s first *billable exercise session*. An evaluation without exercise would not meet this criterion.

**FEV1/FVC Ratio**
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. (Not the percent value)

**Admitting / Respiratory Diagnosis**
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.
<table>
<thead>
<tr>
<th>Most Recent Hospitalization for COPD:</th>
</tr>
</thead>
<tbody>
<tr>
<td>For pulmonary procedures such as lung transplantation, enter the date of the hospital admission. Enter the date of the <em>most recent</em> 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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Severity of Obstruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use GOLD guidelines for severity based on airflow obstruction, i.e., mild &gt; 80% predicted moderate 50-80% predicted severe 30-50% predicted very severe &lt; 30% predicted (or 30-50% with chronic respiratory failure) <strong>All include FEV1/FVC ratio &lt; 70% predicted</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post-bronchodilator (pre-PB value if post value not available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use the values from the most recent test date available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pulmonary Function Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter values (scores) for tests used for dyspnea (Maximum Borg with 6MWT, MMRC, and UCSD SOBQ,BDI/TDI), 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 Pulmonary Rehabilitation Outcomes Resource Guide for further information on the tools listed in the registry.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinical Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please check this box when the patient meets one of the conditions outlined below. This checkbox will excluded these patients for Program Certification Performance Measure Calculations. For more information on the Performance Measures, please click here.</td>
</tr>
</tbody>
</table>

- Inability to complete the dyspnea screening instrument with reasonable accommodations
- Patient refusal to complete the intake and/or discharge dyspnea screening instrument

<table>
<thead>
<tr>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weigh the patient <em>prior to exercise</em> 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).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>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).</td>
</tr>
</tbody>
</table>
Functional Capacity: Test Cannot Be Completed

Please check this box when the patient meets one of the conditions outlined below. This checkbox will excluded these patients for Program Certification Performance Measure Calculations. For more information on the Performance Measures, please click here.

- Patients unable to participate in a 6MWT due to physical, cognitive, neurological, psychological, or safety reasons.
- Patient completing less than 10 PR sessions within a 3 month period.

Peak METs

For the intake value, use the estimated peak MET level attained during the third PR exercise session. (Use the first two exercise sessions to tweak the exercise intensity.) For the discharge value, use the estimated peak MET level attained during the discharge exercise session or last exercise session. The estimated peak MET value should be calculated using validated American College of Sports Medicine (ACSM) equations.

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.

Steps per Day:
Enter the average number of steps taken per day as recorded on a pedometer, accelerometer or other validated physical activity monitor.

Exercise minutes/day

Enter the average number of minutes per day the patient engages in moderate intensity exercise on days the patient exercises or is physically active. For the admission value, the patient’s usual exercise behavior in the few weeks prior to the time of their event or date of initial assessment should be used. For the discharge value, use the patient’s usual behavior one to two weeks prior to discharge. Include minutes of exercise spent during PR.

Exercise days/week

Enter the average number of days per week the patient engages in moderate intensity exercise and/or physical activity. For the admission value, the patient’s usual exercise behaviors in the few weeks prior to the time of their event or date of initial assessment should be used. For the discharge value, use the patient’s usual behavior 1-2 weeks prior to discharge. Include days exercised in PR.

Oxygen Tank Size

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

**Long-acting beta agonists** (long-acting beta\textsubscript{2} agonists, long acting \textbeta\textsubscript{2}-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\textsubscript{2} receptors in the smooth muscle in the lungs. This class may reduce the need for shorter-acting \textbeta\textsubscript{2}-agonists. Long-acting beta\textsubscript{2} agonists with 12-hour duration of action include salmeterol (Serevent, combined with fluticasone in Advair), formoterol (Foradil, combined with budesonide in Symbicort and mometasone in Duleria), and arformoterol (a nebulized medicine available under the brand name Brovana). Long-acting beta\textsubscript{2} agonists with 24-hour duration of action include indacaterol (Arcapta) and vilanterol (combined with fluticasone in Breo Ellipta). LABA-LAAC combo **ANORO® ELLIPTA®** (umeclidinium and vilanterol) is also a common LABA.

**Short-acting beta agonists** (beta\textsubscript{2} 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.

**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 (acilinium bromide) is a LAAC used twice daily for the long-term maintenance treatment of bronchospasm in COPD. **INCRUSE® ELLIPTA®** (umeclidinium inhalation powder) and LABA-LAAC combo **ANORO® ELLIPTA®** (umeclidinium and vilanterol) are also common LAACs.

**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.

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>beclomethasone</td>
<td>QVAR</td>
</tr>
<tr>
<td>budesonide</td>
<td>Pulmicort</td>
</tr>
<tr>
<td>ciclesonide</td>
<td>Alvesco</td>
</tr>
<tr>
<td>fluticasone</td>
<td>Flovent</td>
</tr>
<tr>
<td>mometasone</td>
<td>Asmanex</td>
</tr>
</tbody>
</table>
Combinations of an inhaled corticosteroid and a long-acting beta2-agonist include:

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>budesonide and formoterol</td>
<td>Symbicort</td>
</tr>
<tr>
<td>fluticasone and salmeterol</td>
<td>Advair</td>
</tr>
<tr>
<td>mometasone and formoterol</td>
<td>Dulera</td>
</tr>
<tr>
<td>fluticasone and vilanterol</td>
<td>Breo Ellipta</td>
</tr>
</tbody>
</table>

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.

**Tobacco Status**

The options for Tobacco Use Status within the registry are:

- Never Smoker
- Current (< one month)
- Recent (1—6 Months)
- Former (>6 Months)

Tobacco use tracking should include cigarettes, cigars, cigarillos, chew tobacco, and e-cigarettes.

**Tobacco Cessation Intervention Options**

**Tobacco Cessation Counseling:** Brief tobacco cessation counseling at program entry. If the patient is not willing to make a quit attempt, intervention should be aimed at helping the patient improve their readiness for an eventual quit attempt.

**Tobacco cessation pharmacotherapy:** Medication may be provided to patients who are not yet ready to quit, but who are ready to reduce to quit.

**Referral to specialist:** Referral to a tobacco treatment program or specialist outside of the CR program

**Tobacco Intervention Not Indicated:** Documentation of a medical reason for not receiving tobacco cessation intervention or tobacco relapse prevention intervention (e.g. limited life expectancy).

**Tobacco Status (DC/FU)**

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.”
Health-Related Quality of Life: Test Cannot Be Completed

Please check this box when the patient meets one of the conditions outlined below. This checkbox will excluded these patients for Program Certification Performance Measure Calculations. For more information on the Performance Measures, please [click here].

- Inability to complete the HRQoL screening instrument with reasonable accommodations
- Patient refusal to complete the intake and/or discharge HRQoL screening instrument

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).