To ensure consistency in the data entered, definitions of several of the data elements in the AACVPR Outpatient Cardiac Rehabilitation Registry have been standardized. All data entered must conform to these particular definitions. When entering data, please also note the following:

1. It is not necessary to enter data in every field. Enter as much information as your resources allow and protocols define. For the functional and psychosocial assessments, choose at least one outcome to measure and report.
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 value you are reporting.

Most of the fields have help text in the registry that can be accessed by moving the mouse cursor over the field. The information below is provided as additional information for select fields.

Regarding the functional, dietary and psychosocial tools, it is not necessary to use all the tools displayed. Choose one or more tools that are appropriate for your patient population and that provide enough information about the patient in order to generate a comprehensive rehabilitation treatment plan. A basic assessment “toolkit” should include a depression screening tool, a dietary assessment tool, and a health-related quality of life instrument. It also is not necessary to use any of the supported tools; however, scores from non-supported tools will not be able to be reported in the registry.

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

<table>
<thead>
<tr>
<th>Patient Demographics</th>
<th>Medical History</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session Copay</strong></td>
<td><strong>Diagnoses/procedures</strong></td>
</tr>
<tr>
<td>Enter a per session copay amount, if any, the patient pays for participation in CR. If there is no copay ($0 copay), please enter 0 into the field. If the copay is unknown, please leave the field blank.</td>
<td>Enter the diagnoses or procedures that prompted the referral to CR. Enter all that apply and select a diagnosis/procedure as the primary diagnosis. For example, if the patient was admitted for a non-ST elevation MI and subsequently had angioplasty and coronary stenting, enter “NSTEMI” and “PCI” as the diagnosis/procedure. NSTEMI would be the primary event, followed by PCI. Also enter the date of the hospital admission. <em>For patients who are referred to CR with stable exertional angina or heart failure and who were NOT hospitalized, enter the date of the physician consult that prompted the referral.</em></td>
</tr>
<tr>
<td><strong>Risk factors</strong></td>
<td><strong>Significant past cardiovascular history</strong></td>
</tr>
<tr>
<td>Select the appropriate option to note the presence or absence of hypertension, hyperlipidemia, and diabetes mellitus/impaired glucose metabolism as risk factors. Select the risk factor as present even if the risk factor is controlled with medications.</td>
<td>Select any factors that are in the patient’s past medical history but are not the primary reason[s] for CR entry.</td>
</tr>
</tbody>
</table>
**Comorbidities**

Select any comorbid conditions for which the patient is *currently being treated*. A past history of cancer that is in remission or has been surgically removed would not be included.

<table>
<thead>
<tr>
<th><strong>Program</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Referral date</strong></td>
<td>Enter the date the referral document was <em>signed by a physician</em>. For patients referred from an inpatient care team, this may be the date of the discharge orders. If the patient does not eventually enroll in the program, select “No” for the Enrolled field and enter the primary reason for non-enrollment.</td>
</tr>
<tr>
<td><strong>Enrollment date</strong></td>
<td>Enter the date of the patient’s first <em>billable exercise session</em>. A billable session would use either the 93797 or 93798 code. An orientation session without exercise would not meet this criterion.</td>
</tr>
<tr>
<td><strong>Justification for number of prescribed exercise sessions</strong></td>
<td>Select the option that best describes how the number of prescribed exercise sessions was determined for the patient. For example, if the patient’s health insurance limits the number of outpatient CR sessions to 12, select “Insurance.” If your program’s risk stratification protocol determines the patient should have 24 sessions, select the “Risk stratification” option. If it is your program’s protocol to prescribe 36 sessions for all patients, select the “Protocol” option.</td>
</tr>
<tr>
<td><strong>Program discharge date</strong></td>
<td>Enter the date of the last billed Phase 2 exercise session or discharge assessment session.</td>
</tr>
<tr>
<td><strong>Completion status</strong></td>
<td>The patient is defined as having completed CR 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 CR and the primary reason for non-completion should be entered.</td>
</tr>
<tr>
<td><strong># of sessions completed</strong></td>
<td>Enter the number of billed outpatient CR exercise sessions the patient completed.</td>
</tr>
<tr>
<td><strong># of non-center sessions</strong></td>
<td>Enter the number of exercise sessions from the total above that were not performed in the CR center but were still under the aegis of the CR program, eg, in tele-rehab models, where the patient is being monitored/surveilled while exercising. The session <em>must be billable by the CR program</em> to be counted.</td>
</tr>
<tr>
<td><strong># ECG sessions</strong></td>
<td>Enter the number of completed sessions that were ECG-monitored sessions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Clinical/Tools</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre/post lab values and dates (lipids, fasting blood glucose, hemoglobin A1C)</strong></td>
<td>Use the values from the most recent test date you can find in the medical record that is no earlier than one (1) year prior to the assessment date. Do not use values that are more than one year old at the time of the assessment. For example, if the patient’s enrollment date is in November and he/she had lipid results from three months earlier (in August), use these values. If there are no entry values within the one-year time limit, leave the fields blank. If the patient's discharge was subsequently in January but he/she did not have any repeat lipid tests done, DO NOT repeat the previous values. Instead, leave the discharge fields blank.</td>
</tr>
</tbody>
</table>
If the patient is scheduled to have labs done *as part of his/her admission and/or discharge evaluation*, you can use those results in the corresponding sections. If the lipids, glucose, or A1C value was obtained by point-of-care methods such as a portable glucometer or Cholestech machine, check the POC (point-of-care) option.

**Blood pressure**

Use a resting blood pressure, either one prior to starting exercise or one after exercise. If the blood pressure is elevated, it is appropriate to check it again to confirm that the elevated blood pressure is not just a transient event and then use the average of 2 BP's over a 5 minute period as the resting BP for the measure. Use AHA guidelines for proper BP measurement and determination of cuff size.

**Blood Pressure: Test Not Completed**

Please check this box for the following conditions where a standard blood pressure measurement is not feasible or unsafe: Blood pressure measurement in patients with a left ventricular assist device (LVAD) does not produce a systolic and diastolic blood pressure, only a mean pressure. Therefore patients who have an LVAD should not be included in the measure denominator or numerator results. Medical or surgical contraindications to blood pressure measurement could include bilateral lymphedema, bilateral mastectomy, upper extremity amputation, bilateral upper extremity thromboembolism, or other contraindications as determined by the patient’s healthcare provider. Checking this box will exclude patients from the Program Certification Performance Measures calculations. For more information on the Performance Measures, please click here.

**Tobacco use status**

The options for Tobacco Use Status within the registry are:

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

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 use 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.”
Medication prescribed

Has the medication (Aspirin, beta-antagonist, ACE inhibitor or receptor blocker, statin, PCSK9 inhibitors) been prescribed to the patient? If so, check the “Yes” option; if not, check the “No” option. If the medication was not prescribed because of a contraindication – the patient had negative side effects or there was another medical reason for not prescribing the medication – select the “No - Exception” option. You will be prompted to enter a reason for the exception. If the reason for the patient not being prescribed the medication is unknown or if it is not clear that the patient has been prescribed the medication, select the “Unknown” option.

NOTE: For Statin/Prescribed, if the patient is prescribed a statin, select the appropriate “intensity” from the option list. Refer to the “Resource for Statin Therapy” document for details.

Medication adherence

Is the patient adhering correctly to the medication prescription? Select the “Yes” option if the patient is taking the medication according to the prescription; otherwise, select the “No” option. If the patient is not taking the prescribed medication because of intolerance or side effects, select the “No - Exception” option. You will be prompted to enter a reason for the non-adherence. If it is not known why the patient is not taking the prescribed medication, select the “Unknown” option.

Weight

Weigh the patient prior to exercise without shoes and while wearing his/her typical or usual exercise clothes. Record weight to the nearest tenth of a 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).
**Waist circumference**

Measure the waist circumference using the NIH criteria, i.e., a horizontal measurement at the highest point on the iliac crest, preferably using reliable instruments such as a Gulick II or MyoTape tape measure. Measure to the nearest quarter inch. (Please refer to the “Assessment by Waist Circumference” in the registry resources for protocol.)

**Maximal METs**

Use the estimated maximum MET value attained during a graded, symptom-limited, maximal exercise test (GXT). Select what type of test was performed (treadmill, bike, arm ergometer, other, or unknown).

**Peak Exercise METs**

For the intake value, use the estimated peak MET level attained during the third CR 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**


**6-minute cycle distance**

Report distance pedaled in feet or meters for the 6-minute cycle test using an appropriately calibrated Schwinn Airdyne Cycle Ergometer. (Miles attained on the Airdyne x 5280 feet = feet pedaled.) (Please refer to “Validity and Reliability of the North Carolina 6-Minute Cycle Test” [Verrill et al., J Cardiopulm Rehabil. 2006; 26: 224-230.] for protocol.)

**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 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 CR. “Moderate” intensity is defined as approximately 3–5 METs.
**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 should be used. For the discharge value, use the patient’s usual behavior 1-2 weeks prior to discharge. Include days exercised in CR.

**Steps per day**
For the intake value, enter the average number of steps per day the patient attains during the first week of CR participation as measured by a pedometer calibrated according to the manufacturer’s instructions. For the discharge value, enter the average number of steps per day in the final week of CR participation.

**Functional Assessment: Test Not Completed by the Patient.**
Check this box if the patient meets one of the conditions outlined below. Patients unable to participate in a 6MWT, a graded exercise test, or unable to use an exercise device that can be calibrated to estimate METs, due to physical, cognitive, neurological, psychological, or safety reasons or patients who have not completed 4 weeks of CR. Checking this box will exclude patient from Program Certification Performance Measure calculations. For more information on the Performance Measures, please [click here](#).

**Psychosocial Section: Test Cannot Be Completed by the Patient**
Check this box if the patient is unable to complete the depression instruments for the reasons described below. Checking this box will exclude the patient from the Program Certification Performance Measure calculations. For more information on the Performance Measures, please [click here](#).
- Inability to complete the depression instruments with reasonable accommodations
  - Examples of Reasonable Accommodations:
    - Staff member reads instrument instructions and questions to the patient
    - Staff member enters patient’s responses to test items to the instrument
  - Presence of comprehension limitation that precludes completion of the instrument
  - Lack of availability of the tool used by the CR program in a language understood by the patient
  - Patient declines to complete the assessment

**Hospital Utilization**

**Hospital readmissions and reasons for readmissions**
Enter all UNPLANNED hospital readmissions. DO NOT include planned cardiac procedures such as angioplasties. Select the most pertinent reason for the patient’s readmission to the hospital. Include readmissions that occur during the patient’s participation in Phase 2 CR and those that occur during the period between the patient’s discharge from Phase 2 and follow-up assessment.

**Adverse events**
Adverse events are medical events that require immediate cessation of exercise, assessment, and intervention by CR staff and immediate transport to an emergency department. It is assumed that a physician will be contacted regarding the patient’s disposition and that the patient will be admitted to the hospital as a result of the event.

**Unexpected events**
Unexpected events are medically related events that require cessation of exercise and staff intervention and assessment. A physician may be contacted as part of the disposition. The patient may or may not be referred to the emergency department, depending on the situation/event.
Disposition

Select from “MD called,” “ED visit,” or “Hospital admission.” These are not mutually exclusive, but graded in response. Depending on the severity of the event, you may elect to only contact the patient’s physician. If more severe, the patient may be taken to the Emergency Department (ED). If the patient is admitted after being seen in the ED, select “Hospital admission.” In the latter two cases, it is assumed that the patient’s physician will be notified.

ED visits

Enter the date(s) and reason(s) for visits to an Emergency Department. These visits are usually less than 1 day in duration.