Patient journey: Acute percutaneous coronary intervention (PCI) episode

*Patient experiences acute symptoms, suspects myocardial infarction and goes straight to the ED*

**ED visit**
- Protocol for rapid assessment including EKG, labs, IV, Oxygen, medication
- Appropriate diagnostics

**Angiogram and PCI procedure**
- Sources of variation include: anesthesia, site of access, stent type, # of vessels addressed, pharmaceuticals and contrast agents

**Follow-up care**
- Medication
- Visits with PCP and/or cardiologist
- Skilled nursing facility
- Cardiac rehab

**Potential complications**
E.g., stroke, myocardial infarction, acute kidney injury, non-adherence to follow-up care, readmissions

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1 Some non-acute patients self-admit to the ED and are either treated or discharged to the “non-emergent” pathway
2 STEMI guidelines indicate intervention within 2 hours; NSTEMI and others within 48 hours when urgent
Sources of value: Acute percutaneous coronary intervention (PCI) episode

1. Some non-acute patients self-admit to the ED and are either treated or discharged to the “non-emergent” pathway
2. STEMI guidelines indicate intervention within 2 hours; NSTEMI and others within 48 hours when urgent

Patient experiences acute symptoms, suspects myocardial infarction and goes straight to the ED

ED visit
- Protocol for rapid

- Employ appropriate diagnostic tests to inform selection of interventional procedures
- Make the most efficient use of patient stay and minimize waiting for procedures and tests

Angiogram and PCI procedure
- Reduce potential for complications due to technical performance (e.g., site of access, type of procedure)
- Reduce readmissions through coordinated discharge care and patient education

Follow-up care
- Medication
- Employ evidence-based choice of therapies and medications
- Skilled nursing facility
- Cardiac rehab

Potential episode trigger event

Potential complications
- E.g., stroke, myocardial infarction, acute kidney injury, non-adherence to follow-up care, readmissions

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Acute PCI episode definition (1/2)

<table>
<thead>
<tr>
<th>Area</th>
<th>Episode base definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Episode triggers¹</td>
<td>▪ <strong>Professional claim</strong> for a set of PCI-specific Px and an <strong>ED or inpatient facility claim</strong> with a primary acute ischemic heart disease-specific Dx (410.X or 411.X)</td>
</tr>
<tr>
<td>Episodewindow</td>
<td>▪ Episodewindow: All inpatient, outpatient, long term care, professional, and pharmacy claims ▪ <strong>During post-trigger window:</strong> All spend associated with relevant diagnoses and complications, relevant imaging and testing procedures, relevant medications and supplies (e.g. cardiomyopathy, diagnostic angiogram, ACE inhibitors, stroke, etc.) and inpatient admissions less BPCI exclusions</td>
</tr>
<tr>
<td>Claims included²</td>
<td>▪ <strong>During the trigger window:</strong> All inpatient, outpatient, long term care, professional, and pharmacy claims ▪ <strong>During post-trigger window:</strong> All spend associated with relevant diagnoses and complications, relevant imaging and testing procedures, relevant medications and supplies (e.g. cardiomyopathy, diagnostic angiogram, ACE inhibitors, stroke, etc.) and inpatient admissions less BPCI exclusions</td>
</tr>
<tr>
<td>Principal accountable provider</td>
<td>▪ The PAP is the <strong>facility</strong> where the PCI is performed ▪ The billing provider ID on the triggering facility claim will be used to identify the PAP ▪ Payers may alternatively choose to identify the PAP based on the contracting entity responsible for the triggering claim</td>
</tr>
</tbody>
</table>

1 Listed codes also include all sub-codes  
2 A full list is available in the detailed business requirements
Acute PCI episode definition (2/2)

**Episode base definition**

- **Risk adjustment**: 8 factors for use in risk adjustment including cardiac arrest during the trigger PCI, complex hypertension, and fluid and electrolyte disorders\(^1\)
- **Episode exclusion**: There are three types of exclusions:
  - Business exclusions:
    - Members under 18 years old or above 64 years old
    - Others: Multiple payers, third party liability, inconsistent enrollment, PAP out of State, exempt PAP, no PAP, dual eligibility, long-term care, long hospitalization, missing APR-DRG, and incomplete episodes
  - Clinical exclusions:
    - Members with any of 13 clinical factors\(^1\)
    - Members with an unusually large number of comorbidities\(^1\)
    - Members who left treatment against medical advice or died
  - High cost outlier exclusions: Episode’s risk adjusted spend is 3 standard deviations above the mean (after business and clinical exclusions)

**Quality metrics linked to gain-sharing**:

- Percent of episodes with adverse outcomes\(^2\)

**Quality metrics for reporting only**:

- Percent of episodes where the trigger PCI involves multiple vessels, including multiple branches
- Percent of episodes with a repeat PCI

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1 A full list is available in the detailed business requirements
2 Adverse outcomes include AV fistula or dissection of coronary artery, post-operative hemorrhage, post-operative infection, myocardial infarction, pulmonary embolism or vein thrombosis, stent complication, or stroke