BMC2

PCI Data Dictionary

Blue Cross Blue Shield of Michigan

Percutaneous Coronary Interventions

Data Collection Definitions

Definitions updated 12/22/2020 for 2021 Discharges

Patient Information

Date of Discharge

Data Abstraction Instructions:

Enter the date the patient was discharged from your facility for the current hospitalization (mm/dd/yyyy).

Selections:

enter (mm/dd/yyyy)

Required:
Yes

NCDR Cath PCI Patient ID

Data Abstraction Instructions:

Enter CathPCI Identification number that matches CathPCI data sent to NCDR. This number is generated either by a vendor tool or the CathPCI website.

Required:
Yes

NCDR Cath PCI Other ID

Data Abstraction Instructions:

Enter your own identification number. For example, case number or a number of your choice.

Required:
Yes

Date of Birth

Data Abstraction Instructions:

Enter patient date of birth dd/mm/yyyy

Selections:

enter dd/mm/yyyy

Required:
Yes

Insurance Coverage

Insured

Data Abstraction Instructions:

If patient has no health insurance coverage, mark no. The term “self-pay” may be shown.
* If the patient is listed as " Medicaid Pending", mark them as Uninsured.

Selections:

- Yes
- No

Required:
Yes

Commercial Insurance

Data Abstraction Instructions:

A type of health insurance that covers medical expenses for the insured. Commercial policies can be sold individually or as part of a group plan.
•Employment-based health insurance is coverage offered through one's own employment or a relative's. It may be offered by an employer or by a union.
•Own Employment-based health insurance is coverage offered through one's own employment and only the policyholder is covered by the plan.
•Direct-purchase health insurance is coverage through a plan purchased by an individual from a private company.

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*BCBSM: Healthy Blue Outcomes, Simply Blue HRA; Simply Blue HSA; Community Blue
*Other Payer Examples: Priority, Aetna, Humana

Selections:

- Yes
    - BCBSM
    - Other Payer
- No

Required:
Yes

Health Maintenance Organization (HMO)

Data Abstraction Instructions:

A **health maintenance organization** (HMO) is an organization that provides or arranges managed care for health insurance, self-funded health care benefit plans, individuals and other entities in the United States and acts as a liaison with health care providers (hospitals, doctors, etc.) on a prepaid basis.

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* Blue Care Network (BCN) Michigan: Healthy Blue Living; Healthy Blue Living Rewards; Healthy Blue HMO HRA; Blue Care Network HMO HRA; BCN Advantage HMO-POS; Blue Elect Plus; BCN HMO; Blue Essentials
* Other HMO Example: HAP

Selections:

- Yes
    - Blue Care Network (BCN) Michigan
    - Other HMO
- No

Required:
Yes

Government Provided Insurance

Data Abstraction Instructions:

Government health insurance includes plans funded by governments at the federal, state, or local level. The major categories of government health insurance are medicare, medicaid, the Children's Health Insurance Program (CHIP), military health care, state plans, and the Indian Health Service.

- **Medicare Original** is the Federal program which helps pay health care costs for people 65 and older and for certain people under 65 with long-term disabilities.
    - If Yes to Medicare, Patients may have a **Medicare Supplemental that they pay for**. Medigap (also Medicare supplement insurance or Medicare supplemental insurance) refers to various private supplemental health insurance plans sold to Medicare beneficiaries in the United States that provide coverage for medical expenses not or only partially covered by Medicare. Medigap's name is derived from the notion that it exists to cover the difference or "gap" between the expenses reimbursed by Medicare and the total amount charged.
    - **Medicare Supplemental Coverage:**
        - **BCBSM**
        - **Other Payer Medicare supplemental Coverage**:
            - HAP Senior Plus
- **Medicare Advantage** (Part C)
    - **BCBSM:**
        - Group Options: The UAW Retiree Medical Benefits Trust- URMBT Hourly Retirees: Chrysler, Ford, GM; Michigan Public School Employees Retirement System
        - My Blue Medigap Plan
    - **BCN**:
        - HMO-POS options: Elements, Basic, Classic, Prestige
        - HMO option: Focus (Wayne County Only)
    - **Other**
- **Medicaid** is a program administered at the state level, which provides medical assistance to the needy. Families with dependent children, the aged, blind, and disabled who are in financial need are eligible for Medicaid. It may be known by different names in different states.
- **Blue Cross Complete of Michigan** is a medicaid health insurance plan contracted with the Michigan Department of Community Health. The plans service areas include Livingston, Washtenaw, and Wayne Counties. For more information see: http://www.mibluecrosscomplete.com/member/blue-cross-complete/blue-cross-complete-of-michigan.shtml
- **County** : Many communities in Michigan (not all) are using an innovative approach to providing health care benefits to persons in need. Programs called County Health Plans are serving as a vehicle to provide access to organized systems of health care for the indigent uninsured and lower income persons without private or public health insurance. Examples include: Mid-Michigan Health Plan (MHP), Ingham Health Plan (IHP), Northern Health Plan (NHP), Kent Health Plan (KHP), and Washtenaw Health Plan (WHP).
- **Other:** Other Government Insurance (like Canadian Health Insurance, Military Health Care, or Indian Health Services).

****Medicare has *two* options**:**
1. Original Medicare, government provided (which includes part A (hospital coverage) and part B (medical outpatient coverage)

2. Medicare Advantage , offered by private companies with contracts with Medicare to provide hospital and medical services (A & B) which is called part C.

The second option, Medicare Advantage can be an HMO, PPO, private pay for service plans, special needs plans, and medical savings account plans.

If a patient has the original Medicare with parts A & B, they can have a Medicare supplemental plan as well. These supplemental plans are also private payers and can be Blue Cross, United Health, Humana, Omaha, etc.

If a patient has Medicare Advantage there will not be a supplemental insurance plan as well.

Selections:

- Yes
    - Medicare Original
        - Medicare Supplemental (Y / N)
            - BCBSM
            - Other Payer Medicare supplemental coverage
    - Medicare Advantage (Part C)
        - BCBSM
        - BCN
        - Other
    - Medicaid

    - Blue Cross Complete of Michigan
    - County
    - Other
- No

Required:
Yes

Other

Patient History/Comorbidity

Current/recent GI Bleed

Data Abstraction Instructions:

Indicate yes if any occurrence of melena or hematemesis in last 30 days or any history of GI bleed including peptic ulcer disease that may influence clinical management during this hospitalization.

Selections:

- Yes
- No

Required:
Yes

Prior ICD

Data Abstraction Instructions:

History of prior ICD placement at any time.

Selections:

- Yes
- No

Required:
Yes

Afib/Aflutter

Data Abstraction Instructions:

Prior to procedure, or history of: paroxysmal, persistent, or permanent atrial fibrillation and/or atrial flutter.

Selections:

- Yes
- No

Required:
Yes

History of TIA/CVA

Data Abstraction Instructions:

- Cerebrovascular Accident (CVA): Patient has a history of stroke, i.e., loss of neurological function with residual symptoms at least 72 hours after onset, presumed to be from vascular etiology.
- Transient Ischemic Attack (TIA): Patient has a history of loss of neurological function that was abrupt in onset but with complete return of function within 24 hours, presumed to be due to vascular etilogy.

Including prior to this admission and up to start of PCI.

Selections:

- Yes
- No

Required:
Yes

Diabetes Treatment

Data Abstraction Instructions:

Select patients highest level of diabetes therapy.
If patient is not diabetic select not applicable "N/A"
Example: Patient is on Metformin and Lantus we would enter IDDM.

Selections:

- IDDM
- NIDDM
- Not Applicable

Required:
Yes

Heart Team Evaluation

Data Abstraction Instructions:

Evidence within the medical record that a formal multi-disciplinary heart team evaluation occurred within 90 days prior to PCI, including the recommendations of the heart team. Minimal required attendees would include: clinical cardiologist, interventional cardiologist, and cardiac surgeon. These teams ideally meet face to face, but meeting via a “virtual” program (teleconference/Webex) is also acceptable if appropriate documentation is present in the medical record.

While not required at this time, an ideal heart team would consist of: cardiac surgeons, interventional cardiologists, referring cardiologist, clinical/non-invasive cardiologist, physicians from other specialties, and non-physician team members. The patients should be integrated in the process of decision making regardless of how the heart team discussions took place.

*Individual consultations with other Interventional Cardiologist and/or Cardio-Thoracic Surgeons, **do not** meet this definition.

Required:
Yes

CT Surgeon and Additional Interventional Cardiologist Consulted

Data Abstraction Instructions:

Evidence within the medical record that a cardio thoracic surgeon **and** an interventional cardiologist (other than the interventionalist performing the PCI procedure) were consulted regarding the CAD treatment approach within 90 days prior to PCI.

Required:
Yes

Cardiac Arrest

Data Abstraction Instructions:

Indicate if there has been an episode of cardiac arrest noted within 24 hours of current procedure start.

Notes: To indicate "yes", the event should be documented as requiring CPR and/or defibrillation.
Include tachy and brady arrest.

Selections:

- Yes
- No

Required:
Yes

Therapeutic Hypothermia in the setting of Cardiac Arrest

Data Abstraction Instructions:

Indicate if the patient has had therapeutic hypothermia in the setting of cardiac arrest within 6 hours of PCI procedure. If yes, enter date, time (Military) and department hypothermia initiated. The initiation time refers to the time (Military) the cooling protocol is initiated.

Notes: Cooling blankets, ice packs, cool saline infused via peripheral IV, ***are included*** if a core temperature of 32-36 degrees Celsius is consistently noted. These temperature measurements must have been obtained via internal monitoring (bladder, PA catheter, etc.), and have been performed on a consistent basis(please refer to your facilities protocol). The decreased core temperature should ideally be reached within 6 hours of ROSC(return of spontaneous circulation), and be maintained for at least 12 hours in order to be considered therapeutic hypothermia for purposes of this field.

Attempts to "cool down" a patient without internal temperature monitoring and/or without consistent temperature control should not be included.

Selections:

- Yes
  - Enter Date & Time
    - Not Available
  - Enter Department
    - ER
    - Cath Lab
    - ICU/CCU
    - Not Available
- No

Required:
Yes

pH

Data Abstraction Instructions:

In cases of cardiac arrest within 24 hours of procedure start, enter arterial pH value to the hundreth decimal point.
pH obtained-yes if arterial pH value is documented
no if evidence is not present in the medical record.
If yes:
First pH-the first value drawn within 24 hours of procedure start during this episode of care (can utilize outside and POC results).
pH at start-value obtained within 24 hours and the value closest to the start of the index PCI procedure, not during or post (can utilize outsideand POC results)

Selections:

- Yes
  - First pH
  - pH at Start
- No

Supporting Definitions:

Approach to Acid-Base Disorders

Ankit N. Mehta, Michael Emmett, in National Kidney Foundation Primer on Kidney Diseases (Sixth Edition), 2014

Acidemia, Alkalemia, Acidosis, and Alkalosis
The normal arterial blood pH range is between 7.36 and 7.44 ($[H^+]$ between 44 and 36 nEq/L). Acidemia is defined as an arterial pH <7.36 ($[H^+]$ >44 nEq/L) and may result from a primary elevation in pCO2, a fall in $[HCO3^-]$, or both. Alkalemia is defined as an arterial pH >7.44 ($[H^+]$ <36 nEq/L). Alkalemia may result from a primary increase in $[HCO3^-]$, a fall in pCO2, or both.

The relationship between pH, pCO2, and $HCO3^-$ concentrations is described by the familiar Henderson-Hasselbalch equation*:

Acidosis and alkalosis are pathophysiologic processes that, if unopposed by therapy or complicating disorders, would cause acidemia or alkalemia, respectively.

https://www.sciencedirect.com/topics/medicine-and-dentistry/blood-ph

Required:
Yes
Soft Minimum:
6.0
Soft Maximum:
9.0

Procedure Information

Required:
No

Procedure Start Date & Time

Data Abstraction Instructions:

Enter the date of the current procedure (mm/dd/yyyy) and enter the time the procedure was initiated. (Military time)

Selections:

- Enter Date & Time

Supporting Definitions:

The time the procedure started is defined as the time which local anesthetic was first administered for vascular access, or the time of the first attempt at vascular access for the intervention (use whichever is earlier), or incision time for open vascular surgery procedures. Indicate the time (hours:minutes) using military 24-hour clock, beginning at midnight (00:00 hours). If an arterial sheath is already in place, use the time of the introduction of a catheter or the time the sheath was exchanged.

Required:
Yes

Performed in Lab#

Data Abstraction Instructions:

Enter a numerical value that corresponds to the cardiac catheterization laboratory in which the procedure currently being entered was performed.

•If your facility does not routinely address their cath labs using a numerical value, it will be necessary to develop a tool that equates each cath lab to a numerical value.

•This tool will need to be distributed to all abstractors to enable consistent data entry of this field.

EXAMPLE: Procedure performed in "combo" room. Tool developed states: "Coronary Lab"=#1, "New Lab"=#2, "Combo Lab"=#3. Please enter "3".

Selections:

- Yes
  - Enter Value in whole number
- Not Documented

Required:
Yes

Indication for Procedure NSTE-ACS

Data Abstraction Instructions:

Select "yes" if NCDR Cath PCI V5.O sequence # 7825 was captured as "NSTE-ACS"

Selections:

- Y=Yes
- N=No

Required:
Yes

If yes select one of the following

If NCDR sequence #7825 was entered as NSTE-ACS please indicate whether the patient was diagnosed with NSTEMI or USA.
Selections:

- NSTEMI
- USA

Presented to cath lab from

Data Abstraction Instructions:

Select the selection that corresponds to patients location prior to arrival to cardiac cath lab/cath lab holding area for this procedure.

- Home-patient came from an area outside of the hospital (private residence,physician office, nsg/rehabilitation facility, prison/jail) many sites consider these patients as "outpatient".
- ED-patient came directly from your facilities emergency care department to the cath lab. Instance in which the patient arrives directly via EMS should be captured in this category also.
- Another Acute Care Facility-patient came from another hospital or free standing ED directly to the cath lab.
- Other Area of This Facility-patient was in an area other than the ED (ICU, Inpatient floor, Short stay unit, 23 hour admit area, Surgery, Endo, etc.) prior to arrival to cath lab.
- "Other"-patient came to cath lab from an area that is not within this facility nor from another acute care facility (utilization of this option should be rare).

Selections:

- Home
- ED
- Another Acute Care Facility
- Other Area of This Facility
- Other

Required:
Yes

Peak Intra Procedure ACT

Data Abstraction Instructions:

Enter the peak intra-procedure ACT in seconds.

- Activated clotting time (ACT) should be measured during the procedure after the heparin IV bolus is given (within 1 hour of heparin bolus). Example: STEMI patient receives heparin bolus in Emergency Department
- The ACT recorded for this field, must be performed **during**, ***NOT*** at the end of the procedure.
- If there are multiple specimens obtained during the procedure, enter the highest measurement of ACT (peak) in seconds
- Enter "not obtained" if peak ACT or clotting measurement was not obtained during the procedure
- If the highest value exceeds the limit of the device please enter the highest reportable value +1. Example: device limit is 400 seconds. Result is reported "Exceeds Limit". Enter 401 seconds.
- For purposes of abstraction of this field: **During (intra) procedure= Procedure start-removal of the interventional guide**

Selections:

- Yes
  - Enter value in seconds
- Not documented

Required:
Yes
Suffix:

seconds
Maximum:
600

Left Ventricular End Diastolic Pressure (LVEDP)

Data Abstraction Instructions:

Indicate LVEDP (Left Ventricular End Diastolic Pressure) obtained during procedure.
*If multiple values obtained, please capture the value obtained pre PCI.
** In cases where there is a discrepancy between left ventricular end diastolic pressure value obtained via hemodynamics system and physician, please enter the value calculated per the physician unless an obvious error.

¡http://www.cathlabdigest.com/articles/Hemodynamics-a-12-Letter-WordAn-intro-basics

Selections:

- Yes
  - Enter Value in mmHg
- Not Documented

Required:
Yes

IVUS/OCT Post PCI

Data Abstraction Instructions:

Indicate whether or not IVUS/OCT was utilized after PCI portion of procedure underway.

When approaching this definition, the question you are trying to answer is; "Was IVUS/OCT used to optimize PCI?" We are not addressing whether or not IVUS/OCT was used as one of the tools to diagnose/assess the lesion prior to PCI.

Example #1: Patient has NSTEMI, arrives in cath lab, diagnostic coronary angiography is performed. Physician assesses lesion with IVUS and then inserts stent. No further IVUS (or OCT) is performed. We would code this situation as "No" since IVUS was used to diagnose, not optimize PCI.

Example #2: Patient has NSTEMI, arrives in cath lab, diagnostic coronary angiography is performed. Physician assesses lesion with OCT and then inserts stent. The physician then performs IVUS and two additional balloon inflations. We would code "Yes" for this scenario as IVUS was utilized to optimize PCI.
Selections:

- Yes
- No

Required:
Yes

COVID-19

Data Abstraction Instructions:

Indicate the COVID status known at procedure start. If there are multiple results available within 7 days prior to procedure start, please enter the result that is closest to procedure start time.

Positive COVID-19*= within 7 days of procedure start, patient has tested positive for COVID-19 documented by clinician and/or laboratory specimen result (lower respiratory, upper respiratory, serology, sputum, stool, urine, oropharangeal or nasopharangeal swab)

If Positive COVID, enter the date and time of positive result posted. If a date is documented but the time is not documented enter the date and then enter 00:00 for the time. If date and time are not documented, select "Not Documented".

Negative COVID-19*= within 7 days of procedure start, patient has tested negative for COVID-19 documented by clinician and/or laboratory specimen result (lower respiratory, upper respiratory, serology, sputum, stool, urine, oropharyngeal or nasopharyngeal swab)

If Negative COVID, result, enter the date and time of negative result posted. If a date is documented but the time is not documented enter the date and then enter 00:00 for the time. If date and time are not documented, enter Not Documented.

Investigating COVID=possibility patient is infected is being investigated (specimen for testing may or may not have been obtained yet but results are not posted)

COVID Not Suspected= there is no documentation that the patient is suspected to have COVID-19 and they have not been tested.

Recovered COVID = The patient was previously diagnosed with COVID-19 infection (lab or clinical criteria) and is no longer contagious as defined by:

Test-based strategy:

- At least three (3) days (72 hours) have passed since recovery defined as resolution of fever and improvement of respiratory symptoms, AND
- Two (2) consecutive negative COVID-19 laboratory tests >= 24 hours apart

OR

Symptom-based strategy:

- At least three (3) days (72 hours) have passed since recovery defined as resolution of fever and improvement of respiratory symptoms, AND
- At least ten (10) days have passed since symptom onset

OR

If tested positive for COVID-19 and never exhibited symptoms:

- At least 10 days have passed since first positive COVID-19 test, OR
- Two (2) consecutive negative COVID-19 laboratory tests >= 24 hours apart

Timeframe: Prior to procedure start.

*Please include any of the viruses associated with the COVID-19 pandemic(2019-nCOV, MERS-CoV, SARS-CoV, SARS-CoV2, and other associated viruses identified by the CDC)

**If procedure performed prior to the pandemic, please select "not suspected"

Selections:

- Positive COVID
- **If "Positive COVID" selected**
    - Documented
        - Enter Date/Time: MM/DD/YYYY-HH:MM
    - Not Documented
- Negative COVID
- **If "Negative COVID" selected**
    - Documented
        - Enter Date/Time: MM/DD/YYYY-HH:MM

- Not Documented

- Investigating COVID
- COVID not suspected
- Recovered COVID-19

Supporting Definitions:

World Health Organization Laboratory testing for coronavirus disease 2019 (COVID-19) in suspected human cases. Interim guidance 2 March 2020

https://apps.who.int/iris/bitstream/handle/10665/331329/WHO-COVID-19-laboratory-2020.4-eng.pdf?sequence=1&isAllowed=y

Centers for Disease Control and Prevention. (2020, May 2). CDC.gov

https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-hospitalized-patients.html

Centers for Disease Control and Prevention. (2020, May 3). CDC.gov.

https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html

Required:
Yes

Outcomes in Lab

Indicate whether there were any complications or outcomes from the time the patient entered the lab to the time of departure from the lab.

Angina > 30 minutes

Data Abstraction Instructions:

Symptoms of angina lasting greater than 30 minutes despite treatment with nitrates and opiates. Mark yes, if angina requiring treatment is noted for >30 minutes in the cath lab and/or, if angina noted in the cath lab and is ongoing after leaving the lab and is over 30 minutes.

Example: patient 15 minutes of angina at end of case, morphine administered, but continues in ICU for another 20 minutes –="yes".

Example: patient is noted to have CP in the cath lab at 08:00, they are started on NTG gtt. At 08:15 CP is still noted and NTG gtt rate is increased. At 08:32, CP is decreased but still present NTG gtt still infusing="yes"

Selections:

- Yes
- No

Required:
Yes

Acute Closure

Data Abstraction Instructions:

Indicate for the treated segment if an acute closure was observed during the PCI procedure. Complete occlusion of the treated vessel is usually indicated by TIMI grade flow of 0 or 1.

Selections:

- Yes
- No

Required:
Yes

No Reflow

Data Abstraction Instructions:

Indicate for the treated segment if there was a period where no flow phenomenon was noted during the PCI procedure. No reflow phenomenon pertains to lack of flow distal to the treated segment.
No reflow pertains to lack of perfusion down the vessel in spite of the vessel having been opened with either ballooning or stenting.

Selections:

- Yes
- No

Required:
Yes

Untreated Dissection

Data Abstraction Instructions:

Significant (flow limiting) dissection noted but not treated. Do not capture type A & B dissections.

Selections:

- Yes
- No

Required:
Yes

Side Branch Occlusion

Data Abstraction Instructions:

Total occlusion of any side branch resulting from treatment of the index lesion.

For example, 100% occlusion of 1st diag during stenting of mid LAD lesion. To qualify as a side branch occlusion the vessel must be occluded at the end of the case.

Selections:

- Yes
- No

Required:
Yes

Rescue IIb/IIIa

Data Abstraction Instructions:

Rescue IIb/IIIa is use of IIb/IIIa drug (Abciximab/Reopro, or Epitifibatide/Integrillin) in addition to the interventional drug already in use after the procedure is underway. Slow flow or thrombus would be possible rationale for IIb/IIIa utilization after another drug was initially chosen.

Approach this field as using the IIb/IIIa as a" bailout" or not part of the initial anticoagulant therapy strategy. Where there is a lack of documentation whether or not the IIb/IIIa is the initial therapy, assess whether or not the medication was administered after a device was used (balloon , atherectomy or stent). If heparin alone is the intial strategy, bailout/rescue IIb/IIIa would be captured "yes" if IIb/IIIa added after procedure underway. If heparin is part of the initial anticoagulation complementing the IIb/IIIa, please capture "no".

Examples: Bivalrudin in use, physician engages lesion and request IIb/IIIa be administered (either arterial or venous). =yes
Heparin 3, 000 units given at 12:00, at 12:07 first inflation perrformed, 12:16 Integrilin given. =yes
Heparin 3,000 units given at 12:00, Integrilin given at 12:07, first inflation performed at 12:09.=no

Selections:

- Yes
- No

Required:
Yes

Distal Embolization

Data Abstraction Instructions:

Angiographic cutoff of a distal branch or vessel at any point during the procedure and/or decreased flow in a distal vessel that was previously patent in the absence of an occlusion at the site of the target lesion

Selections:

- Yes
- No

Required:
Yes

Outcomes Post Lab

Indicate whether there were any complications or outcomes from the time the patient left the cath lab to the time of next PCI or hospital discharge/death, whichever comes first.

Q MI

Data Abstraction Instructions:

A myocardial infarction associated with the development of new Q waves that are .03 seconds in width and/or > one third of the total QRS complex in contiguous leads **AND** as evidenced by subsequent enzyme level elevation.

*This field provides additional information related to the type of myocardial infarction you captured in NCDR V 5.0 Intra and Post-procedure events #9001, 9002, 9003

Selections:

- Yes
- No

Required:
Yes

Stent Thrombosis

Data Abstraction Instructions:

If patient returned to the lab and angiography revealed stent thrombosis in stent(s) placed during this discharge, mark this variable.

Selections:

- Yes
- No

Required:
Yes

Repeat Angiography

Data Abstraction Instructions:

Repeat angiography for any reason including recurrent symptoms of angina or staged PCI.

Selections:

- Yes
- No

Required:
Yes

Infection/Sepsis

Data Abstraction Instructions:

Positive blood, urine, or sputum cultures requiring treatment with antibiotics. Positive xrays for pneumonia do not constitute infection sepsis. There must be positive cultures and treatment with antibiotics. If there is documentation of infection present prior to procedure, (for example admission urine specimen is positive for UTI, or a patient is already under treatment for an infection) do not count this as Infection/Sepsis. Count only infections that are diagnosed post procedure.

Selections:

- Yes
- No

Required:
Yes

VT/VF Requring Therapy

Data Abstraction Instructions:

Ventricular tachycardia or ventricular fibrillation requiring either pharmacologic or mechanical therapy. Includes an ICD firing.

Selections:

- Yes
- No

Required:
Yes

New Atrial Fibrillation

Data Abstraction Instructions:

Select "yes" if patient experienced a new instance of atrial fibrillation after exiting cath lab prior to discharge from facility.

Example(s):

- Ms. Smith has no history of atrial fibrillation, the morning after PCI staff notes afib on the monitor and calls the physician who confirms diagnosis of atrial fibrillation=Yes
- Mr. Jones has had atrial fibrillation for three years now but communicates with staff that it has "acted up" for a while now. He also has an episode of atrial fibrillation post PCI=No

Selections:

- Yes
- No

Required:
Yes

Primary Access Site Vascular Complication

Data Abstraction Instructions:

Any vascular complication noted below occurring **at the site utilized for the intervention**. Restrict coding to complication(s) occurring within 72 hours of procedure end or removal of arterial access and/or device .

Selections:

- Yes
    - Pseudoaneurysm
    - AV fistula
    - Femoral neuropathy
    - Retroperitoneal hematoma
    - Acute thrombosis
    - Surgical repair
    - Loss of limb
    - Hematoma
- No

Supporting Definitions:

Pseudoaneurysm: The occurrence of a disruption and dilation of the arterial wall without identification of the arterial wall layers at the site of the catheter entry demonstrated by arteriography or ultrasound.
AV Fistula: A connection between the access artery and the accompanying vein that is demonstrated by arteriography or ultrasound and most often characterized by a continuous bruit.
Femoral Neuropathy: Loss of movement or sensation in the leg due to nerve damage. Often presents with thigh weakness, numbness, and variable pain.

Retroperitoneal Hematoma: accumulation of blood in the retroperitoneal space.
Acute thrombosis: Total obstruction of the artery by thrombus. Transradial access thrombosis may be demonstrated by loss of radial pulse, hand pain may or may not be present, or via Doppler ultrasound demonstrating thrombotic radial occlusion. Femoral access thrombosis may be demonstrated by: pain, pallor, paresis, pulselessness and paraesthesia (more correctly anaesthesia).
Surgical Repair: Includes invasive strategies employed to repair site of vascular access site (such as surgical closures, exploration of the arteriotomy site, balloon angioplasty or covered stent (JOMED GraftMaster) placement to deal the arterial tear) may also be necessary.
Loss of Limb: Amputation of limb related to access site.
Hematoma: a localized collection of blood outside the blood vessel. Please only include hematomas that meet one or more of the following criteria: Hemoglobin drop of >3g/dl, transfusion of whole blood or packed red blood cells, procedural intervention/surgery at the bleed site to reverse or correct the bleeding.

Required:
Yes

Secondary Access Site

Data Abstraction Instructions:

Indicate if a secondary arterial access site was used or attempted for any reason.

Selections:

- Yes
- No

Required:
Yes

Rationale for Secondary Access Site

Data Abstraction Instructions:

Were any of the following devices used, or did any of the following circumstances apply? If so, check all devices used or circumstances that apply.

Example: the PCI is performed via the RFA, without groin complications. The LFA is accessed during the procedure, and an Impella is placed. During the course of the admission, the patient develops a thrombus in the left lower extremity that results in a surgical procedure. You would mark NO for the Primary PCI Site. You would mark Yes for Secondary Access site, Yes for Thrombus, and Yes for Impella.

Selections:

- Yes
    - IABP
    - Tandem Heart
    - ECMO
    - Impella
    - Impella 2.5
    - Impella CP
    - Impella RP
    - Impella 5.0/LD
    - Additional Procedure Access
    - Failed Access
        - Femoral
        - Radial
        - Brachial
        - Other
- No

Required:
Yes

Secondary Access Site Vascular Complication

Data Abstraction Instructions:

Any vascular complication noted below occurring at another arterial access site that was obtained for a support device or for another reason (or failed access attempt prior to use of primary site). Restrict coding to complication(s) occurring within 72 hours of procedure end or removal of arterial access and/or device .

Selections:

- Yes
    - Pseudoaneurysm
    - AV fistula
    - Femoral neuropathy
    - Retroperitoneal hematoma
    - Acute thrombosis
    - Surgical repair
    - Loss of limb
    - Hematoma
- No

Supporting Definitions:

Pseudoaneurysm: The occurrence of a disruption and dilation of the arterial wall without identification of the arterial wall layers at the site of the catheter entry demonstrated by arteriography or ultrasound.
AV Fistula: A connection between the access artery and the accompanying vein that is demonstrated by arteriography or ultrasound and most often characterized by a continuous bruit.
Femoral Neuropathy: Loss of movement or sensation in the leg due to nerve damage. Often presents with thigh weakness, numbness, and variable pain.
Retroperitoneal Hematoma: accumulation of blood in the retroperitoneal space.
Acute thrombosis: Total obstruction of the artery by thrombus. Transradial access thrombosis may be demonstrated by loss of radial pulse, hand pain may or may not be present, or via Doppler ultrasound demonstrating thrombotic radial occlusion. Femoral access thrombosis may be demonstrated by: pain, pallor, paresis, pulselessness and paraesthesia (more correctly anaesthesia).
Surgical Repair: Includes invasive strategies employed to repair site of vascular access site (such as surgical closures, exploration of the arteriotomy site, balloon angioplasty or covered stent (JOMED GraftMaster) placement to deal the arterial tear) may also be necessary.
Loss of Limb: Amputation of limb related to access site.
Hematoma: a localized collection of blood outside the blood vessel. Please only include hematomas that meet one or more the following criteria: Hemoglobin drop of >3g/dl, transfusion of whole blood or packed red blood cells, procedural intervention/surgery at the bleed site to reverse or correct the bleeding.

Required:
Yes

Transfusion of Platelets

Data Abstraction Instructions:

Any transfusion of platelets. Include all transfusions even if transfusion was given during major surgery in association with vascular repair or bypass surgery.

Selections:

- Yes
- No

Required:
Yes

Transfusion of FFP

Data Abstraction Instructions:

Any transfusion of FFP (fresh frozen plasma). Include all transfusions even if transfusion was given during major surgery in association with vascular repair or bypass surgery.

Selections:

- Yes
- No

Required:
Yes

Discharge

Required:
No

Lipid Panel

Data Abstraction Instructions:

Indicate whether or not a lipid panel was obtained within 30 days prior to PCI procedure start or at anytime during this admission/episode of care (pt arrival-pt discharge).

Scenario: Patient arrival 1/1/2021 @ 16:45, Procedure 1/2/2021 @ 10:00, Discharged 1/3/2021 @ 13:00. Lipid panel obtained 12/15/2020 @12:00. Enter: "yes"

Scenario: Patient arrival 1/1/2021 @ 16:45, Procedure 1/2/2021 @ 10:00, Discharged 1/3/2021 @ 13:00. Lipid panel obtained 1/2/2020 @ 06:00. Enter: "yes"

Scenario: Patient arrival 1/1/2021 @ 16:45, Procedure 1/2/2021 @ 10:00, Discharged 1/3/2021 @ 13:00. Lipid panel obtained 1/3/2020 @12:00. Enter: "yes"

Required:
Yes

Total Cholesterol

Enter the Total Cholesterol level mg/dl obtained within 30 days of PCI procedure start or during this admission/episode of care.

NOTES: If this level is obtained both within 30 days prior to PCI and post PCI during this admission/episode of care, please enter the value obtained pre PCI.

Example:

Patient arrival 1/1/2021 @ 16:45, Procedure 1/2/2021 @ 10:00, Discharged 1/3/2021 @ 13:00. Lipid panel obtained 12/15/2020 @12:00, total cholesterol=358 mg/dl. Another Lipid panel is obtained 1/3/2020 @12:00, total cholesterol=322 mg/dl. **Enter: 358 mg/dl**

HDL

Enter the high-dendisty lipoprotein (HDL) level mg/dl obtained within 30 days of PCI procedure start or during this admission/episode of care.

NOTES: If this level is obtained both within 30 days prior to PCI and post PCI during this admission/episode of care, please enter the value obtained pre PCI.

Example:

Patient arrival 1/1/2021 @ 16:45, Procedure 1/2/2021 @ 10:00, Discharged 1/3/2021 @ 13:00. Lipid panel obtained 12/15/2020 @12:00, HDL=38 mg/dl. Another Lipid panel is obtained 1/3/2020 @12:00, HDL 42mg/dl. **Enter: 38 mg/dl**

LDL

Enter the low-dendisty lipoprotein (LDL) level mg/dl obtained within 30 days of PCI procedure start or during this admission/episode of care.

NOTES: If this level is obtained both within 30 days prior to PCI and post PCI during this admission/episode of care, please enter the value obtained pre PCI.

Example:

Patient arrival 1/11/2021 @ 16:45, Procedure 1/12/2021 @ 10:00, Discharged 1/14/2021 @ 13:00. Lipid panel obtained 12/28/2020 @12:00, LDL=170 mg/dl. Another Lipid panel is obtained 1/13/2020 @12:00,LDL 168 mg/dl. **Enter: 170 mg/dl**

Triglycerides

Enter the triglycerides level mg/dl obtained within 30 days of PCI procedure start or during this admission/episode of care.

NOTES: If this level is obtained both within 30 days prior to PCI and post PCI during this admission/episode of care, please enter the value obtained pre PCI.

Example:

Patient arrival 1/1/2021 @ 16:45, Procedure 1/2/2021 @ 10:00, Discharged 1/3/2021 @ 13:00. Lipid panel obtained 12/15/2020 @12:00, Triglycerides=300 mg/dl. Another Lipid panel is obtained 1/3/2020 @12:00, total cholesterol=260 mg/dl. **Enter: 300 mg/dl**

LVEF Assessment this Admission

Data Abstraction Instructions:

Indicate whether or not an LVEF assessment was performed during this admission. Invasive(cath lab) or non-invasive (TTE, TEE, MUGA, Stress, etc.) methods would all be applicable.

Selections:

- Yes
- No

Required:
Yes

LVEF Percentage

If LVEF assessed during this admission, enter value obtained closest to time of discharge (% of blood that is pumped (or ejected) out of the ventricles with each contraction of the left ventricle).

Example: 4/1/2018 Stress LVEF at rest is 45%, 4/2/2018 Cath Lab LVEF is 55%, 4/4/2018 TTE LVEF is 50%, patient discharged 4/4/2018. The value that would be entered into BMC2 LVEF field would be 50% with rationale that TTE was performed closest to discharge.

Please follow the same coding instructions LVEF% instructions noted in NCDR Cath PCI dictionary. See below:

NCDR Cath PCI coding instruction notes:
Enter a percentage in the range of 01 - 99. If a percentage range was reported, report the lowest number of the range (i.e.50-55%, is reported as 50%).
If only a descriptive value is reported (i.e.normal), enter the corresponding percentage value from the list below:
Normal = 60%
Good function = 50%
Mildly reduced = 45%
Fair function = 40%
Moderately reduced = 30%
Poor function = 25%
Severely reduced = 20%

Smoking Cessation Counseling

Data Abstraction Instructions:

Documented evidence that the patient was referred for smoking cessation counseling or counseled to stop smoking in the hospital.

Selections:

- Yes
- No

Supporting Definitions:

Note: Documnetation can be by any health care provider.

If patient refuses literature, still mark yes.
If patient dies, Smoking Cessation to be marked no.
If patient never smoked, mark no.
If patient leaves AMA and does not receive Smoking Cessation, mark no.

Required:
Yes

Cardiac Rehab Liaison

Data Abstraction Instructions:

Please indicate whether or not there is evidence in the medical record that *a cardiac rehabilitation staff member or other appropriately trained staff member "liaison"*, provided face to face information related to cardiac rehabilitation participation to the patient **prior to discharge**.

You would select "N/A if there is documentation in the medical record that the patient is not a suitable candidate for cardiac rehabilitation (would correlate with NCDR CathPCI field #10116="No-Medical Reason Documented" or "No-Healthcare System Reason Documented").

Selections:

- Yes
- No
- N/A

Required:
Yes

LDL Goal

Data Abstraction Instructions:

Indicate whether or not a numeric LDL goal recommendation is documented in either the procedural report and/or the discharge/after visit summary.

Example: Please continue statin therapy post discharge. LDL goal is 70 mg/dl for this patient with know coronary artery disease. Please select "Yes".

Example: Continue high dose statin. Please select "No".

Required:
Yes

P2Y12 Duration

Data Abstraction Instructions:

Indicate whether or not the P2Y12 duration recommendation is documented in either the procedural report and/or the discharge/after visit summary.

Example: Interventionalist documents the followiing : Dual anti-platelet therapy for 6 months then Aspirin alone. Please select "Yes"

Example: “triple therapy” for duration of 3 months, then please continue with warfarin and ASA afterwards. Please select "Yes".

Required:
Yes

COVID-19 Status Post PCI

Data Abstraction Instructions:

Indicate the COVID-19 status for this discharge/episode of care. If there are multiple results available post procedure through discharge, please enter the first positive result available post procedure. If there are no positive results, please enter the first negative result available post procedure.

Positive COVID-19*= post PCI the patient has a positive test result for COVID-19*. Specimen** may have been obtained, either prior to or post PCI, was positive after PCI. If a specimen** obtained during this episode of care is positive for COVID-19* at time of abstraction, please select this field even if results were posted after discharge.

If Positive COVID-19, enter the date and time of positive result posted. If a date is documented but the time is not documented enter the date and then enter 00:00 for the time. If date and time are not documented, select "Not Documented".

Negative COVID-19*=patient has tested negative for COVID-19 post PCI. Specimen obtained, either prior to or post PCI, was negative. If a specimen** obtained during this episode of care is negative for COVID-19* at time of abstraction, please select this field even if results were posted after discharge.

If Negative COVID-19, enter the date and time of negative result posted. If a date is documented but the time is not documented enter the date and then enter 00:00 for the time. If date and time are not documented, select "Not Documented".

No COVID-19* Result= Specimen** obtained, but no result at time of abstraction.

No COVID-19* Specimen**= patient was not tested for COVID-19 during this episode of care

No Change in COVID Status=patient was identified as “Positive COVID-19”,”Negative COVID-19”, or “Recovered COVID-19” prior to the first procedure and there has been no change in patient condition prompting further testing

***Timeframe**: Post PCI through discharge from facility.* While the result timeframe you are addressing is post PCI, the actual specimen may have been obtained prior to the PCI procedure. If patient has multiple PCI procedures, please select response based on COVID-19 status after last PCI procedure.

*Please include any of the viruses associated with the COVID-19 pandemic (2019-nCOV, MERS-CoV, SARS-CoV, SARS-CoV2, and other associated viruses identified by the CDC)

**Specimen sites: lower respiratory, upper respiratory, serology, sputum, stool, urine, oropharangeal or nasopharangeal swab.

Selections:

○ **Positive COVID-19**

If "Positive COVID-19" selected

- Documented
  - ○ Enter Date/Time: MM/DD/YYYY-HH:MM
- Not Documented

○ **Negative COVID-19**

If "Negative COVID-19" selected

- Documented
  - ○ Enter Date/Time: MM/DD/YYYY-HH:MM
- Not Documented

○ **No COVID-19 Result**

- **COVID-19* Specimen**
- **No Change in COVID Status**

Supporting Definitions:

World Health Organization Laboratory testing for coronavirus disease 2019 (COVID-19) in suspected human cases. Interim guidance 2 March 2020

https://apps.who.int/iris/bitstream/handle/10665/331329/WHO-COVID-19-laboratory-2020.4-eng.pdf?sequence=1&isAllowed=y

Required:
Yes

If "Positive COVID-19" selected

Data Abstraction Instructions:

Indicate the date & time of the first positive COVID-19 specimen.
If Positive COVID-19, enter the date and time of Positive Result Posted. If a date is documented but the time is not documented enter the date and then enter 00:00 for the time. If date and time are not documented, select "Not Documented".

Selections:

- Documented
    - Enter Date/Time: MM/DD/YYYY-HH:MM
- Not Documented

Required:
Yes