

Acknowledgements

The Leapfrog Group would like to acknowledge with gratitude the contribution of [Zynx Health](#). These measures and their indicators were developed by and are provided courtesy of Zynx Health, a company of the Hearst Corporation, with financial support from [Premier, Inc.](#)

Note: To access underlined links throughout this document, return to this document referenced from the home page of the on-line Patient Safety Survey at <https://leapfrog.medstat.com>.

The specifications in this document are for auditing and measuring the rate of adherence to process measures of quality. Because of the clinical specificity needed, procedure and condition definitions DIFFER from those used to count volume of procedures elsewhere in the survey and should not be used for that purpose.

See FAQs about these process measures at the end of this document.

Note that, for simplicity, indicators listed in this document are abbreviated.

Measurement Guidelines for Coronary Artery Bypass Graft (CABG) Indicators

CABG - 1: Aspirin prescribed at discharge

A. Definition of metrics:

Numerator: Number of CABG patients who received aspirin (or aspirin/dipyridamole, or dipyridamole; if aspirin allergic, clopidogrel or ticlopidine) upon hospital discharge

Denominator: Total number of patients who have undergone isolated CABG and have no contraindications to all agents above

B. Operational definitions:

1. Principal procedure of CABG = Determined using the following ICD-9 PROCEDURE CODES

36.1x Bypass anastomosis for heart revascularization

Indications of exclusion (as per JCAHO for aspirin in AMI)

- Age < 18 years
- Transferred to another acute care hospital
- Expired during hospitalization
- Left against medical advice
- Discharge to hospice

2. Aspirin = oral aspirin and aspirin-containing medications as specified by JCAHO for aspirin in AMI ([Appendix C: Medication Tables from JCAHO website](#))

3. Upon discharge = As part of the discharge medications list

4. Isolated CABG¹ = as coronary artery bypass grafting without valve repair or replacement, repair of congenital defects, or aneurysmectomy.
5. Contraindications to aspirin (**as per JCAHO for aspirin in AMI**) = Documentation of one or more of the following [*NOTE: Patients having one or more of the following contraindications may still potentially be eligible to receive the medication.*]
 - Allergy to aspirin
 - Active bleeding on admission or during hospitalization
 - Warfarin prescribed upon discharge
 - Other reasons as documented by physician, nurse practitioner, or physician assistant

CABG - 2: IMA is the conduit of choice for surgical revascularization

A. Definition of metrics:

Numerator: Number of patients undergoing isolated primary CABG who received IMA grafting

Denominator: Total number of patients who have undergone isolated primary CABG

B. Operational definitions:

1. Principal procedure of CABG = Determined using the following ICD-9 PROCEDURE CODES

36.1x Bypass anastomosis for heart revascularization

Indications of exclusion (as per JCAHO for aspirin in AMI)

- Age < 18 years
- Transferred to another acute care hospital
- Expired during hospitalization
- Left against medical advice
- Discharge to hospice

2. Eligibility = Patients undergoing **isolated primary CABG**
3. Isolated Primary CABG = as first time coronary artery bypass grafting without valve repair or replacement, repair of congenital defects, or aneurysmectomy (see page 1 for a reference)
4. IMA = Internal mammary (thoracic) artery
5. Exclusion criteria^{2,3} for IMA grafting = Documentation of one or more of the following
 - The Left Anterior Descending (LAD) artery is not suitable for LIMA grafting (eg, donor or target vessels <1.5 mm in size)

¹ Passman R, Beshai J, Pavri B, Kimmel S. Predicting Post-Coronary Bypass Surgery Atrial Arrhythmias From the Preoperative Electrocardiogram. *Am Heart J* 2001; 142(5): 806-810.

² Sethi GK, Copeland JG, Moritz T, Henderson W, Zadina K, Goldman S. Comparison of postoperative complications between saphenous vein and IMA grafts to left anterior descending coronary artery. *Ann Thorac Surg* 1991; 51: 733-738.

³ Berger PB, Alderman EL, Nadel A, Schaff HV. Frequency of early occlusion and stenosis in a left internal mammary artery to left anterior descending artery bypass graft after surgery through a median sternotomy on conventional bypass: benchmark for minimally invasive direct coronary artery bypass. *Circulation* 1999; 100: 2353-2358.

- Calcified or diffuse coronary disease in the LAD
- Subclavian stenosis
- Previous thoracic surgery
- Previous radiation
- Current use of immunosuppressive agents (eg, Prednisone, Imuran, or other)
- Coagulation disorder
- Myocardial infarction within 7 days prior to the procedure
- Chronic renal insufficiency
- Require emergent operation
- Require concomitant surgery (eg. aneurysm resection, valve replacement)
- Morbid obesity
- Other reasons as documented by physician, nurse practitioner, or physician assistant

CABG - 3: Beta-blocker within 24 hours after surgery**A. Definition of metrics:**

Numerator: Number of CABG patients who received beta-blockers within 24 hours after surgery

Denominator: Total number of patients who have undergone CABG and have no contraindications to beta-blockers

B. Operational definitions:

1. Principal procedure of CABG = Determined using the following ICD-9 PROCEDURE CODES
36.1x Bypass anastomosis for heart revascularization

Indications of exclusion (as per JCAHO for beta-blockers in AMI)

- Age < 18 years
 - Transferred to another acute care hospital
 - Expired during hospitalization
 - Left against medical advice
 - Discharge to hospice
2. Beta-blockers = oral beta-blockers as specified by JCAHO beta-blockers in AMI ([Appendix C: Medication Tables from JCAHO website](#))
 3. Within 24 hours = Documentations of the receipt of beta-blockers within 24 hours post-operatively in the medication history list or any procedure field
 4. Contraindications to beta-blockers (as per JCAHO for beta-blockers in AMI) = Documentation of one or more of the following [NOTE: Patients having one or more of the following contraindications may still potentially be eligible to receive the medication.]
 - Allergy to beta-blockers
 - Bradycardia (heart rate < 60 beats/min) on day of discharge or the previous day, while not on a beta-blocker
 - Systolic blood pressure < 90 mm Hg on day of discharge or the previous day, while not on a beta-blocker
 - Second- or third-degree AV heart block at any time during hospitalization or on admission, if no pacemaker

- Other reasons as documented by physician, nurse practitioner, or physician assistant

CABG - 4: Beta-blockers prescribed at discharge

A. Definition of metrics:

Numerator: Number of CABG patients on beta-blockers upon hospital discharge

Denominator: Total number of patients who have undergone CABG and have no contraindications to beta-blockers

B. Operational definitions:

1. Principal procedure of CABG = Determined using the following ICD-9 PROCEDURE CODES

36.1x Bypass anastomosis for heart revascularization

Indications of exclusion (as per JCAHO for beta-blockers in AMI)

- Age < 18 years
 - Transferred to another acute care hospital
 - Expired during hospitalization
 - Left against medical advice
 - Discharge to hospice
2. Beta-blockers = oral beta-blockers as specified by JCAHO beta-blockers in AMI ([Appendix C: Medication Tables from JCAHO website](#))
 3. Upon discharge = As part of the discharge medications list
 4. Contraindications to beta-blockers (**as per JCAHO for beta-blockers in AMI**) = Documentation of one or more of the following [*NOTE: Patients having one or more of the following contraindications may still potentially be eligible to receive the medication.*]
 - Allergy to beta-blockers
 - Bradycardia (heart rate < 60 beats/min) on day of discharge or the previous day, while not on a beta-blocker
 - Systolic blood pressure < 90 mm Hg on day of discharge or the previous day, while not on a beta-blocker
 - Second- or third-degree AV heart block at any time during hospitalization or on admission, if no pacemaker
 - Other reasons as documented by physician, nurse practitioner, or physician assistant

CABG - 5: Lipid-lowering therapy at discharge**A. Definition of metrics:**

Numerator: Number of CABG patients who received lipid-lowering medication upon hospital discharge

Denominator: Total number of patients who have undergone CABG with an LDL level \geq 100 mg/dL⁴ and have no contraindications to lipid-lowering medications

B. Operational definitions:

1. Principal procedure of CABG = Determined using the following ICD-9 PROCEDURE CODES

36.1x Bypass anastomosis for heart revascularization

Indications of exclusion (as per JCAHO for beta-blockers in AMI)

- Age < 18 years
- Transferred to another acute care hospital
- Expired during hospitalization
- Left against medical advice
- Discharge to hospice

2. An LDL level \geq 100 mg/dL as determined by lipid profile test before the surgery

3. Lipid-lowering agents = (Lovastatin, Simvastatin, Pravastatin, Fluvastatin, Atorvastatin, Cerivastatin, Colestipol, Cholestyramine, Colesevelam, Gemfibrozil, Fenofibrate, Nicotinic Acid, (Clofibrate, Dextrothyroxine – these two agents are not commonly used as antihyperlipidemics) and Zetia®² (ezetimibe) – a new drug approved in October, 2002)

4. Upon discharge = As part of the discharge medications list

5. Contraindications to lipid-lowering agents^{5,6} = Documentation of one or more of the following [NOTE: Patients having one or more of the following contraindications may still potentially be eligible to receive the medication.]

- Allergy to any of the lipid lowering products mentioned in # 3
- Complete biliary obstruction
- Preexisting gallbladder disease
- Active liver disease
- Unexplained persistent elevated liver function tests
- Severe renal dysfunction

⁴ Knatterud GL, Rosenberg Y, Campeau L, Geller NL, Hunninghake DB, Forman SA et al. Long-term effects on clinical outcomes of aggressive lowering of low-density lipoprotein cholesterol levels and low-dose anticoagulation in the post coronary artery bypass graft trial. Post CABG Investigators. *Circulation*. 2000; 102:157-165.

⁵ The Post Coronary Artery Bypass Graft Trial Investigators (**Post-CABG**). The effect of aggressive lowering of low density lipoprotein cholesterol levels and low dose anticoagulation on obstructive changes in saphenous vein coronary bypass grafts. *N Engl J Med* 1997; 336: 153-162.

⁶ Pitt B, Waters D, Brown WV, van Boven AJ, Schwartz L, Title LM, Eisenberg D, Shurzinske L, McCormick LS. Aggressive lipid-lowering therapy compared with angioplasty in stable coronary artery disease (**AVERT**). *N Engl J Med* 1999; 341: 70-76.

- Severe biliary cirrhosis
- Other reasons as documented by physician, nurse practitioner, or physician assistant

CABG - 6: Early Extubation**A. Definition of metrics:**

Numerator: Number of CABG patients who were extubated within 24 hours after the completion of surgery

Denominator: Total number of patients who have undergone CABG

B. Operational definitions:

1. Principal procedure of CABG = Determined using the following ICD-9 PROCEDURE CODES

36.1x Bypass anastomosis for heart revascularization

Indications of exclusion (as per JCAHO for aspirin in AMI)

- Age < 18 years
- Transferred to another acute care hospital
- Expired during hospitalization
- Left against medical advice
- Discharge to hospice

2. Extubation = Removal of the endotracheal tube
3. Within 24 hours after surgery = As documented in the procedure field

Measurement Guidelines for Percutaneous Coronary Intervention (PCI)**PCI - 1: Aspirin prescribed at discharge****A. Definition of metrics:**

Numerator: Number of PCI patients who received aspirin (or aspirin/dipyridamole; if aspirin allergic, clopidogrel or ticlopidine) upon hospital discharge

Denominator: Total number of patients who have undergone PCI and have no contraindications to all agents above

B. Operational definitions:

1. Principal procedure of PCI = Determined using the following ICD-9 PROCEDURE CODES:
 - 36.01 Single vessel percutaneous transluminal coronary angioplasty without mention of thrombolytics
 - 36.02 Single vessel percutaneous transluminal coronary angioplasty with mention of thrombolytics

- 36.05 Multiple vessel PTCA at the same session with or without mention of thrombolytics
- 36.06 Insertion of coronary artery stents
- 36.07 Insertion of drug-eluting coronary artery stent(s)

Indications of exclusion (as per JCAHO for aspirin in AMI)

- Age < 18 years
 - Transferred to another acute care hospital
 - Expired during hospitalization
 - Left against medical advice
 - Discharge to hospice
2. Aspirin = oral aspirin and aspirin-containing medications as specified by JCAHO for aspirin in AMI ([Appendix C: Medication Tables from JCAHO website](#))
 3. Upon discharge = As part of the discharge medications list
 4. Contraindications to aspirin (**as per JCAHO for aspirin in AMI**) = Documentation of one or more of the following [*NOTE: Patients having one or more of the following contraindications may still potentially be eligible to receive the medication.*]
 - Allergy to aspirin
 - Active bleeding on admission or during hospitalization
 - Warfarin prescribed upon discharge
 - Other reasons as documented by physician, nurse practitioner, or physician assistant

PCI - 2: Proportion of Patients receiving PTCA within 90 minutes

A. Definition of metrics:

Numerator: Number of eligible patients who received primary PCI and had “door-to-balloon time” ≤ 90 minutes⁷

Denominator: Total number of patients with AMI who received primary PCI

B. Operational definitions:

1. Principal discharge diagnosis of AMI= Determined using the following ICD-9 codes for AMI ([Appendix A: AMI Codes from JCAHO website](#)):
 - 410.01 Anterolateral wall, acute myocardial infarction-initial episode
 - 410.11 Other anterior wall, acute myocardial infarction-initial episode
 - 410.21 Inferolateral wall, acute myocardial infarction-initial episode
 - 410.31 Inferoposterior wall, acute myocardial infarction-initial episode
 - 410.41 Other inferior wall, acute myocardial infarction-initial episode
 - 410.51 Other lateral wall, acute myocardial infarction-initial episode

⁷ Smith SC, Jr., Dove JT, Jacobs AK, Kennedy JW, Kereiakes D, Kern MJ et al. ACC/AHA guidelines for percutaneous coronary intervention (revision of the 1993 PTCA guidelines)-executive summary: a report of the American College of Cardiology/American Heart Association task force on practice guidelines (Committee to revise the 1993 guidelines for percutaneous transluminal coronary angioplasty) endorsed by the Society for Cardiac Angiography and Interventions. *Circulation*. 2001; 103: 3019-3041.

- 410.61 True posterior wall, acute myocardial infarction-initial episode
- 410.71 Subendocardial, acute myocardial infarction
- 410.81 Other specified sites, acute myocardial infarction-initial episode
- 410.91 Unspecified site, acute myocardial infarction-initial episode

AND

Principal procedure of PCI = Determined using the following ICD-9 PROCEDURE CODES
([Appendix A: PTCA codes from JCAHO website](#))

- 36.01 Single vessel percutaneous transluminal coronary angioplasty without mention of thrombolytics
- 36.02 Single vessel percutaneous transluminal coronary angioplasty with mention of thrombolytics
- 36.05 Multiple vessel PTCA at the same session with or without mention of thrombolytics
- 36.06 Insertion of coronary artery stent(s)
- 36.07 Insertion of drug-eluting coronary artery stent(s)

Indications of exclusion (as per JCAHO for aspirin in AMI)

- Age < 18 years
 - Transferred to another acute care hospital
 - Expired during hospitalization
 - Left against medical advice
 - Discharge to hospice
2. Eligible = Patients with acute myocardial infarction (AMI) and ST-segment elevation or new or presumed new left bundle branch block⁸
 3. < 90 minutes = As time (in minutes) from hospital arrival to percutaneous transluminal coronary angioplasty (PTCA)
 4. Exclusion criteria for primary PCI = Documentation of one or more of the following ([Exclusion criteria for invasive cardiac procedure in settings without Full-Support from the ACC/AHA guideline](#))
 - NYHA class III or IV heart failure
 - Acute, intermediate, or high risk ischemic syndromes
 - Recent myocardial infarction with post infarction ischemia
 - Pulmonary edema felt to be caused by ischemia
 - Markedly abnormal non-invasive test indicating a high likelihood of left main or multivessel coronary disease
 - Known left main coronary disease
 - Sever valvular dysfunction especially in the setting of depressed LV performance
 - Other reasons as documented by physician, nurse practitioner, or physician assistant

⁸ Upon review with comparable measures from NQF/JCAHO: http://www.jcaho.org/pms/core+measures/3k_ami8a.pdf, and CMS: http://www.qualitymeasures.ahrq.gov/summary/summary.aspx?ss=1&doc_id=247, we are consistent in our definition of patient eligibility.

Measurement Guidelines for Elective Abdominal Aortic Aneurysm (AAA) repair

AAA - 1: Beta-blocker agent prior to induction

A. Definition of metrics:

Numerator: Number of patients undergoing elective AAA who received beta-blockers prior to the time of induction

Denominator: Total number of patients who underwent elective AAA repair and have no contraindications to beta-blockers

B. Operational definitions:

1. Principal or secondary discharge diagnosis of Elective AAA Repair = Determined using the following:

ICD-9 PROCEDURE CODES for non-ruptured AAA

- 38.34 Resection of aorta with anastomosis
- 38.44 Resection of aorta, abdominal, with replacement
- 38.64 Excision of aorta

AND

ICD-9 DIAGNOSIS CODES for unruptured AAA

- 441.4 Aortic aneurysm without mention of rupture
- 441.9 Aortic aneurysm of unspecified site without mention of rupture

Indications of exclusion (as per JCAHO for beta-blockers in AMI)

- Age < 18 years
 - Transferred to another acute care hospital
 - Expired during hospitalization
 - Left against medical advice
 - Discharge to hospice
 - Emergency cases of AAA repair
2. Beta-blockers = oral or IV (given immediately pre-operative or intra-operative) beta-blockers as specified by JCAHO for beta-blockers in AMI ([Appendix C: Medication Tables from JCAHO website](#))
 3. Prior to induction = Followed usual treatment regimen if chronic beta-blocker user (eg, taking an oral a.m. dose of the drug on the day of surgery or NPO after midnight prior to surgery) or as part of the medication history list on the day of surgery or in anesthesia record form.
 4. Contraindications to beta-blockers (**as per JCAHO for beta-blockers in AMI**) = Documentation of one or more of the following [*NOTE: Patients having one or more of the following contraindications may still potentially be eligible to receive the medication.*]
 - Allergy to beta-blockers

- Bradycardia (heart rate < 60 beats/min) on day of admission or the previous day, while not on a beta-blocker
- Systolic blood pressure < 90 mm Hg on day of admission or the previous day, while not on a beta-blocker
- Second- or third-degree AV heart block at any time during hospitalization or on admission, if no pacemaker
- Other reasons as documented by physician, nurse practitioner, or physician assistant

AAA - 2: Beta- Blockers prescribed at discharge**A. Definition of metrics:**

Numerator: Number of patients undergoing AAA who received beta-blockers upon hospital discharge

Denominator: Total number of patients who underwent AAA repair and have no contraindications to beta-blockers

B. Operational definitions:

1. Principal or secondary procedure of AAA Repair = Determined using the following ICD-9 PROCEDURE CODES:

38.34 Resection of aorta with anastomosis
38.44 Resection of aorta, abdominal, with replacement
38.64 Excision of aorta

Indications of exclusion (as per JCAHO for beta-blockers in AMI)

- Age < 18 years
 - Transferred to another acute care hospital
 - Expired during hospitalization
 - Left against medical advice
 - Discharge to hospice
 - Emergency cases of AAA repair
2. Beta-blockers = oral beta-blockers as specified by JCAHO for beta-blockers in AMI ([Appendix C: Medication Tables from JCAHO website](#))
 3. Upon discharge = As part of the discharge medications list
 4. Contraindications to beta-blockers (**as per JCAHO for beta-blockers in AMI**) = Documentation of one or more of the following [*NOTE: Patients having one or more of the following contraindications may still potentially be eligible to receive the medication.*]
 - Allergy to beta-blockers
 - Bradycardia (heart rate < 60 beats/min) on day of admission or the previous day, while not on a beta-blocker
 - Systolic blood pressure < 90 mm Hg on day of admission or the previous day, while not on a beta-blocker
 - Second- or third-degree AV heart block at any time during hospitalization or on admission, if no pacemaker
 - Other reasons as documented by physician, nurse practitioner, or physician assistant

Measurement Guidelines for Neonatal Intensive Care

NICU - 1: All inborn mothers delivering at 24 through 33 6/7 weeks of gestational age should receive at least one dose of antenatal steroids

For this indicator, hospitals may alternatively use results based on their participation in the Vermont Oxford Network (VON).

A. Definition of metrics:

Numerator: Number of inborn mothers delivering VLBW infants at 24 through 33 6/7 weeks gestational age with no contraindications to antenatal steroids and who received at least one dose of antenatal steroids

Denominator: Total number of eligible inborn mothers delivering VLBW infants at 24 through 33 6/7 weeks gestational age

B. Operational definitions:

1. Principal or secondary discharge diagnosis of Delivery <1500 grams and <32 weeks gestation = Determined using the following ICD-9 DIAGNOSIS CODES:

764.01-764.05 Light for dates without mention of malnutrition--< 500 gms. - 1499 gms.
764.11-764.15 Light for dates with signs of fetal malnutrition--< 500 gms. - 1499 gms.
764.21-764.25 Fetal malnutrition without mention of light for dates--< 500 gms. - 1499 gms.
764.91-764.95 Fetal growth retardation, unspecified--< 500 gms. - 1499 gms.
765.0x Extreme immaturity (usually BW < 1000 gms. or gestation < 28 weeks)
765.10-765.15 Other preterm infants, --< 500 gms. - 1499 gms.

AND

765.21-765.26 Gestation age < 33 weeks

Indications of exclusion

- Mother's age < 18 years
 - Mother expired during hospitalization
 - Transfers in or out
2. Antenatal steroids⁹ = Betamethasone, Dexamethasone. If either agent is not available, hydrocortisone may help to reduce the incidence of respiratory distress syndrome^{10,11}
 3. Eligible mothers = Mothers of very low birthweight infants (500 – 1500g) who were delivered between 24 and 33 6/7 weeks gestational age, **as per the Vermont Oxford Network**

⁹ NIH Consensus Statement 1994 Feb 28-Mar 2;12(2):1-24.

¹⁰ Morrison JC, Whybrew WD, Bucovaz ET, Schneider JM. Injection of corticosteroids into mother to prevent neonatal respiratory distress syndrome. *Am J Obstet Gynecol* 1978; 131: 358-366.

¹¹ Morrison JC, Schneider JM, Whybrew WD, Bucovaz ET. Effect of corticosteroids and Fetomaternal disorders on the L:S ratio. *Obstet Gynecol* 1980; 56: 583-590.

definition.¹²

4. At least one dose = As part of the medication list
5. Contraindications^{13,14} to administer antenatal steroids to mothers = Documentation of one or more of the following [*NOTE: Patients having one or more of the following contraindications may still potentially be eligible to receive the medication.*]
 - Maternal thyrotoxicosis
 - Maternal cardiomyopathy
 - Active maternal infection or chorioamnionitis
 - Mother with tuberculosis
 - Other reasons as documented by physician, nurse practitioner, or physician assistant

¹² 1999 VON Database Manual of Operations. Release 3.5. VON. Burlington, VT.

¹³ American College of Obstetricians and Gynecologists. Antenatal steroid corticosteroid therapy for fetal maturation. Committee Opinion 147. Washington, D.C.: ACOG, 1994.

¹⁴ Steer P, Flint C. ABC of labour care: preterm labour and premature rupture of membranes. *BMJ* 1999; 318(7190): 1059-1062.

Expert Panel-Endorsed Process Measures Frequently Asked Questions



General

1. **I have fewer than 60 cases? Should I measure and report adherence for the indicator(s)?**

Yes. Use all the cases that meet the criteria.

2. **What is the method that should be used to draw the sample of 60 cases?**

Hospitals will need to pull a random sample of more than 60 cases, since some cases will be eliminated based on the exclusion criteria. The exclusion criteria differ from indicator to indicator, so you'll need additional cases for that reason as well. Start by pulling a random sample of cases in excess of 60. If you need additional cases to make 60 because of the exclusion criteria, just do another random sample. Hospitals with fewer than 60 cases in total for any procedure should review all cases.

To sample cases randomly, use a technique that ensures that individual eligible cases in a population for the entire time period have an equal chance of being selected. Consider using methods similar to those described by JCAHO. (http://www.jcaho.org/pms/core+measures/8_sampling.pdf)

3. **Does this mean that each indicator within the clinical groups will have its own sample of 60?**

All will start with a sample size of 60, if at least 60 patients were hospitalized with that condition. Additional patients may be required depending the number of patients who meet the inclusionary and exclusionary criteria per indicator.

4. **Does this mean that all cases will need to be screened for contraindications and then a random sample is selected from the remaining records? (Ex. 131 mothers with deliveries at 24-34 weeks, all charts are reviewed and patients with contraindications to steroids are eliminated. A random sample of 60 is then selected from the remaining cases.)**

60 consecutive cases are to be selected, if at least 60 patients were hospitalized with that condition. Because some of these patients may meet the exclusionary criteria for each indicator, additional patients may be required to end with 60 patients per indicator who satisfy the inclusionary and exclusionary criteria. If 60 patients who meet the inclusionary and exclusionary criteria cannot be identified, please use the total number of eligible patients during that calendar year.

5. **Do the inclusion/exclusion criteria apply to both numerator and denominator?**

Yes. In fact, for each indicator, you should apply all inclusion/criteria to establish cases in the denominator first, either all cases meeting those criteria or a sample of 60 if more than 60 meet all the criteria. The numerator is simply those cases from the denominator that meet the clinical guideline, and the numerator never includes cases not in the denominator.

CABG – Indicator 6 (early extubation)

6. **Virtually all of our patients have at least one of these contraindications to early extubation, so we won't have any observations in our denominator.**

Not all indicators are appropriate for every hospital. We expect that many patients will meet exclusionary criteria for early extubation and potentially other indicators.

Percutaneous Coronary Intervention – Indicator 1 (aspirin at discharge)

7. **Should expired patients be excluded from the denominator?**

Yes.

Expert Panel-Endorsed Process Measures Frequently Asked Questions



Percutaneous Coronary Intervention – Indicator 2 (door-to-balloon time)

8. **Should transfers from another facility be excluded from the denominator and numerator? (JCAHO core measures excludes transfers.)**
Yes
9. **Would the Expert Panelists convened by Zynx consider redefining its indicators to be consistent with JCAHO Core Measures (or CMS, AHA measures?) e.g. AAA repair contraindications are these defined same as Core Measures?**
The panelists attempted to be consistent with JCAHO Clinical Core Measure. AAA repair is not a JCAHO Clinical Core Measure.
10. **Can the expert panel indicator for PTCA balloons/average hours turnaround for AMI be “synchronized” with the JCAHO/CMS/AMA definitions?**
The expert panel has attempted to be consistent with JCAHO/CMS definitions for the door-to-balloon time. See the Leapfrog-Zynx document of definitions and operational guidelines for the Expert Panel-Endorsed Process Measures.)

AAA – Indicator 1 (beta-blockers before anesthesia induction)

11. **Should transfers from another facility be excluded from the denominator and numerator? (JCAHO core measures excludes transfers)**
Yes
12. **The numerator is defined as the number of patients undergoing elective AAA repair who received beta-blockers “by the time” of induction. What is the defined time period for “by the time” of induction?**
Prior to induction = Followed usual treatment regimen if a chronic beta-blocker user (e.g., taking an oral a.m. dose of the drug on the day of surgery) or as part of the medication history list on the day of surgery.

If the patient is a chronic user of beta-blockers, that patient should then receive the regular dose at the normal period of administration, regardless if the dose should fall on the night prior to surgery or in the morning before surgery. If the patient is not a chronic user, that patient should then receive beta-blockers at any time prior to the induction of anesthetics.
13. **We counted patients as a yes who took their regular AM dose at home before coming in for surgery. Is this correct?**
Yes.
14. **What is the defined time period for “by the time” of induction?**
Prior to induction = Followed usual treatment regimen if chronic beta-blocker user (e.g., taking an oral a.m. dose of the drug on the day of surgery) or as part of the medication history list on the day of surgery.

If the patient is a chronic user of beta-blockers, that patient should then receive the regular dose at the normal period of administration, regardless if the dose should fall on the night prior to surgery or

Expert Panel-Endorsed Process Measures Frequently Asked Questions



in the morning before surgery. If the patient is not a chronic user, that patient should then receive beta-blockers at any time prior to the induction of anesthetics.

AAA – Indicator 2 (beta blocker at discharge)

15. Should expired patients be excluded from the denominator?

Yes.

Neonatal intensive care – Indicator 1 (pre-natal steroids for early-term mother)

16. How do we count a patient transferred here from another facility where they received the steroids at the other facility? Is this patient excluded from our data since we did not administer the steroids?

Yes, the patient is excluded from your data.

17. Do we only look at the admission that the patient delivers on? Some preterm patients receive steroids and are then sent home. They then return at a later date and deliver. Does this count as a yes?

Yes.

18. We pulled records based on the gestational age at the time of delivery not the age at the time the steroids were given.

Yes, that is correct.

19. Are patients admitted for a fetal demise excluded? Should this be a contraindication?

Yes. It should be an exclusionary criterion.

20. What is the definition for rupture of membranes?

Any breakage of the amniotic sac.

21. Some patients have prolonged premature rupture of membranes and still receive steroids. Are these patients then excluded?

No. Only patients with premature rupture with imminent delivery within 6-8 hours should be excluded.

22. Some patients who have contraindications still get the steroids. Do we then exclude these patients from our counts?

Yes.