

2019

# AQI NACOR DATA ELEMENT CONCEPTUAL DEFINITIONS

Anesthesia Quality Institute

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**Version 3.0**

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This document clarifies data element conceptual definitions and intent. Synonyms, examples, exclusions and/or notes are included where appropriate and available. Clarifications to these will be made on an as-needed basis. Updates to the official conceptual definitions will be made on an annual basis.

Comments or recommendations should be sent to [askaqi@asahq.org](mailto:askaqi@asahq.org).

This version includes the data elements in AQI NACOR Data Element Conceptual Definitions v2.0 and a set of comorbidity data elements released in December 2017.

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## MINIMUM DATA SET DATA ELEMENTS

**ANESTHESIA START TIME** – Time when the anesthesia team assumes continuous care of the patient and begins preparing the patient for an anesthetic for anesthesia services in the operating room or an equivalent area.

*Note:* Time should be reported in the local time zone.

*AQI XML Schema Element:* <AnesthesiaStartTime>

Anesthesia Start Time as listed in the AQI XML schema is a combination of the Date of Service plus Anesthesia Start Time – The ISO 8601 standard for any date / time value is used (YYYY-MM-DDThh:mm:ss[.mmm] -> 2016-05-01T07:30:00.000)

*Source:* AACD Procedural Times Glossary (1991)

**ANESTHESIA END (FINISH) TIME** – Time at which anesthesiologist turns over care of the patient to a post anesthesia care team (either PACU or ICU). This time ends when the anesthesia team is no longer furnishing anesthesia services to the patient, that is when the patient may be placed safely under postoperative care and when the anesthesia team has completed transfer of patient care.

*Note:* Time should be reported in the local time zone.

*AQI XML Schema Element:* <AnesthesiaEndTime>

Anesthesia End (Finish) Time as listed in the AQI XML schema is a combination of the Date of Service plus Anesthesia End Time – The ISO 8601 standard for any date / time value is used (YYYY-MM-DDThh:mm:ss[.mmm] -> 2016-05-01T07:30:00.000)

*Source:* AACD Procedural Times Glossary (1991)

## ANESTHESIA TYPE

*Note:* Anesthesia is defined as the loss of sensation resulting from pharmacologic depression of nerve function. There are several types of anesthesia including neuraxial, general, or peripheral nerve block. Monitored Anesthesia Care is a specific type of anesthesia service that may be provided when neuraxial anesthesia, general anesthesia, or peripheral nerve block is not utilized.

*Source:* Stedman's Medical Dictionary for the Health Professions and Nursing 2012 (modified)

**NEURAXIAL** – Pertaining to local anesthetics placed around the nerves of the central nervous system

*AQI XML Schema Element:* <AnesthesiaCategory>

**COMBINED SPINAL AND EPIDURAL** – A regional anesthetic technique, which combines both spinal and epidural anesthesia and/or analgesia

*Synonym:* CSE

*AQI XML Schema Element:* <AnesthesiaSubCategory>

*Source:* Cochrane Database of Systematic Reviews 2007 (modified)

**EPIDURAL** – Injection of a local anesthetic and/or other medication into the peridural space of the spinal cord, beneath the ligamentum flavum, that depresses neuronal function and produces loss of ability to perceive pain and/or other sensations

*Synonym:* Peridural Anesthesia

*AQI XML Schema Element:* <AnesthesiaSubCategory>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)

**SPINAL** – Injection of a local anesthetic and/or other medication into the cerebrospinal fluid surrounding the spinal cord that depresses neuronal function and produces loss of ability to perceive pain and/or other sensations

*AQI XML Schema Element:* <AnesthesiaSubCategory>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)

**GENERAL ANESTHESIA** – A drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. General anesthesia often impairs the patient's cardiovascular function and/or the ability to independently maintain spontaneous ventilation. Under general anesthesia, patient may require assistance in maintaining a patent airway and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug induced depression of neuromuscular function.

*AQI XML Schema Element:* <AnesthesiaCategory>

*Source:* American Society of Anesthesiologists, Committee on Quality Management and Departmental Administration. Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia. Oct 15, 2014

**INHALATIONAL GENERAL ANESTHESIA** – A drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. Anesthesia includes the administration of an inhalation agent (nitrous oxide, sevoflurane, desflurane, enflurane, halothane, or isoflurane). General anesthesia often impairs the patient's cardiovascular function and/or the ability to independently maintain spontaneous ventilation. Under general anesthesia, patient may require assistance in maintaining a patent airway and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug induced depression of neuromuscular function.

*AQI XML Schema Element:* <AnesthesiaSubCategory>

*Source:* American Society of Anesthesiologists, Committee on Quality Management and Departmental Administration. Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia. Oct 15, 2014

**TOTAL INTRAVENOUS ANESTHESIA** – A drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. Anesthesia is maintained exclusively by the administration of intravenous medications and inhalation anesthetic agents are not used. General anesthesia often impairs the patient's cardiovascular function and/or the ability to independently maintain spontaneous ventilation. Under general anesthesia, patient may require assistance in maintaining a patent airway and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug induced depression of neuromuscular function.

*Synonym:* TIVA

*AQI XML Schema Element: <AnesthesiaSubCategory>*

*Source:* American Society of Anesthesiologists, Committee on Quality Management and Departmental Administration. Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia. Oct 15, 2014

**MONITORED ANESTHESIA CARE** – A specific type of anesthesia service in which a qualified anesthesia provider has been requested to participate in the care of a patient undergoing a diagnostic or therapeutic procedure

*Synonym:* MAC

*Note:* Indications for Monitored Anesthesia Care depend on the nature of the procedure, the patient's clinical condition, and/or the potential need to convert to a general or regional anesthetic. This is a specific type of anesthesia service that excludes general anesthesia, peripheral nerve block, and neuraxial anesthesia (spinal and epidural anesthesia). Deep sedation/analgesia is also included in MAC.

*AQI XML Schema Element: <AnesthesiaCategory>*

*Source:* American Society of Anesthesiologists, Committee on Quality Management and Departmental Administration. Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia. Oct 15, 2014; Medical Dictionary 2009; CMS definition

**PERIPHERAL NERVE BLOCK**– An injection of a local anesthetic and/or other medication into the area surrounding one or more peripheral nerves that depresses neuronal function and produces loss of the ability to perceive pain and/or other sensations in the specific part of the body innervated by the affected nerve(s). This does not include administration of medications into the epidural or intrathecal spaces.

*Synonyms:* Regional anesthesia, plexus block, nerve block

*Note:* This category of anesthesia includes intravenous regional anesthesia but excludes neuraxial anesthesia.

*AQI XML Schema Element: <AnesthesiaCategory>*

*Source:* Stedman's Medical Dictionary. 28th ed. (modified); Johns Hopkins Health Library, [www.hopkinsmedicine.org](http://www.hopkinsmedicine.org) (modified)

## **ANESTHESIA PHYSICAL STATUS CLASSIFICATION**

**ASA I** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to be a normal healthy patient

*Example:* Healthy, non-smoking, no or minimal alcohol use

*AQI XML Schema Element: <ASAClass>*

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014. [www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA IE** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to be a normal healthy patient who undergoes an emergency surgery (emergency is defined as existing when delay in treatment of the patient would lead to a significant increase in the threat to life or body part)

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA II** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to have mild systemic disease (mild diseases are those only without substantive functional limitations)

*Example:* Current smoker, social alcohol drinker, pregnancy, obesity (30 < BME < 40), well-controlled DM/HTN, mild lung disease

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA IIE** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to have mild systemic disease (mild diseases are those only without substantive functional limitations) who undergoes an emergency surgery (emergency is defined as existing when delay in treatment of the patient would lead to a significant increase in the threat to life or body part)

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA III** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to have severe systemic disease, including substantive functional limitations with one or more moderate to severe diseases

*Example:* Poorly controlled DM or HTN, COPD, morbid obesity (BMI ≥40), active hepatitis, alcohol dependence or abuse, implanted pacemaker, moderate reduction of ejection fraction, ESRD undergoing regularly scheduled dialysis, premature infant PCA < 60 weeks, history (>3 months) of MI, CVA, TIA, or CAD/stents

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA IIIE** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to have severe systemic disease, including substantive functional limitations with one or more moderate to severe diseases who undergoes an emergency surgery (emergency is defined as existing when delay in treatment of the patient would lead to a significant increase in the threat to life or body part)

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA IV** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to have severe systemic disease that is a constant threat to life

*Example:* Recent (< 3 months) MI, CVA, TIA, or CAD/stents, ongoing cardiac ischemia or severe valve dysfunction, severe reduction of ejection fraction, sepsis, DIC, ARD or ESRD not undergoing regularly scheduled dialysis

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA IVE** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to have severe systemic disease that is a constant threat to life who undergoes an emergency surgery (emergency is defined as existing when delay in treatment of the patient would lead to a significant increase in the threat to life or body part)

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA V** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to be moribund and is not expected to survive without the operation

*Example:* Ruptured abdominal/thoracic aneurysm, massive trauma, intracranial bleed with mass effect, ischemic bowel in the face of significant cardiac pathology or multiple organ/system dysfunction

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA VE** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is considered to be moribund and is not expected to survive without the operation who undergoes an emergency surgery (emergency is defined as existing when delay in treatment of the patient would lead to a significant increase in the threat to life or body part)

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA VI** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is declared brain-dead and whose organs are being removed for donor purposes

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**ASA VIE** – American Society of Anesthesiologists (ASA) Physical Status indicating the patient is declared brain-dead and whose organs are being removed for donor purposes who undergoes an emergency surgery (emergency is

defined as existing when delay in treatment of the patient would lead to a significant increase in the threat to life or body part)

*AQI XML Schema Element:* <ASAClass>

*Source:* American Society of Anesthesiologists Physical Status Classification System Oct 15, 2014.  
[www.asahq.org/resources/clinical-information/asa-physical-status-classification-system](http://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system)

**CPT CODE – ANESTHESIA** – The Current Procedural Terminology (CPT) code set describes medical, surgical, and diagnostic services and is designed to communicate uniform information about medical services and procedures among physicians, coders, patients, accreditation organizations, and payers for administrative, financial, and analytical purposes

*Note:* CPT codes for anesthesia include: 00100–01999; 99100–99150.

*AQI XML Schema Element:* <CPTAnesValue>

**CPT CODE – SURGICAL** – The Current Procedural Terminology (CPT) code set describes medical, surgical, and diagnostic services and is designed to communicate uniform information about medical services and procedures among physicians, coders, patients, accreditation organizations, and payers for administrative, financial, and analytical purposes

*Note:* CPT codes for surgery include: 10000-79999; 0000T-9999T.

*AQI XML Schema Element:* <CPTValue>

**DATE OF SERVICE** – The month, day, and year for the Anesthesia Start Time<sup>1</sup>

*Note:* Date should be reported as YYYY-MM-DD in the local time zone.

*AQI XML Schema Element:* <AnesthesiaStartTime>

Anesthesia Start Time<sup>1</sup> as listed in the AQI XML schema is a combination of the Date of Service plus Anesthesia Start Time<sup>1</sup>– The ISO 8601 standard for any date / time value is used (YYYY-MM-DDThh:mm:ss[.mmm] -> 2016-05-01T07:30:00.000)

**FACILITY ID** – The practice specific identification number generated or used by the anesthesia practice's billing software to indicate in what facility the procedure/case was performed.

*Note:* This ID number is not the facility name, facility TIN, or any other easily identifiable number. It must, however, be the same as provided in the practice survey provided to AQI/NACOR.

*AQI XML Schema Element:* <FacilityID>

**ICD CODE** – ICD (International Classification of Diseases) is a set of codes used to indicate patient diagnosis, comorbidities and procedure during any medical encounter

*Note:* In the US, the ICD version used is ICD-CM (International Classification of Diseases - Clinical Modification)

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)



All ICD codes from either ICD-9 or ICD-10 associated with the patient's existing medical conditions should be reported, including comorbidities.

*AQI XML Schema Element:* <ICDValue> = Actual ICD Code  
<ICD Version> = {9, 10}

*Source:* World Health Organization (WHO), CMS

**PATIENT AGE** – The length of time that the patient has lived.

*Note:* Age in years at the Anesthesia Start Time<sup>1</sup>. Age will be calculated from the Date of Birth if available. For pediatric patients less than 1 year old, age in years should be reported using decimal years to the ten-thousandths place. Example: a patient aged 5 days old should be reported as 0.0137 year ( $5/365 = 0.0137$ ). When pediatric data is reported from NACOR, patient age will be reported using the following categories: Less than 7 days; 1 to 8 weeks; 2 months to 11 months and 30/31 days; or patient age in years (whole integer) if 1 year or older.

*AQI XML Schema Element:* <Age>

*Source:* US Census Bureau (modified)

**PATIENT DATE OF BIRTH** – The month, day, and year on which the patient was born; reported as YYYY-MM-DD

*AQI XML Schema Element:* <DOB>

*Source:* US Census Bureau

**PATIENT SEX**

*Note:* This refers to the patient's sex recorded in the medical record. The World Health Organization (WHO) summarizes the issue as follows "Sex refers to the biological and physiological characteristics that define men and women. Gender refers to the socially constructed roles, behaviours, activities, and attributes that a given society considers appropriate for men and women." Oct 21, 2011

The data from most medical records may not permit distinguishing between a patient's sex and their current gender identity.

**MALE** – Sex as defined by reporting entity from the medical record.

*AQI XML Schema Element:* <PatientSex>

**FEMALE** – Sex as defined by reporting entity from the medical record.

*AQI XML Schema Element:* <PatientSex>

**UNKNOWN** – Sex as defined by reporting entity from the medical record.

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

*Note:* Do not use this data element if no information is available. In that case, the data is considered missing.

*AQI XML Schema Element:* <PatientSex>

**MISSING –**

*Note:* This data element is only used when nothing is reported to NACOR.

*AQI XML Schema Element:* <PatientSex>

**PAYMENT METHOD –** The way in which a health care provider is compensated for services provided.

*Note:* Payment methods include: Commercial (includes HMO, PPO, etc.), Government (Medicare Fee for Service – Part A; Medicare – Part B; Medicare Managed Care/Advantage – Part C; Medicaid; Military/VA; other government), Worker’s Compensation, Self-pay, Charity, Other, Unknown.

*AQI XML Schema Element:* <PaymentCode>

*Source:* The Business Dictionary ([www.businessdictionary.com/definition/payment-method.html](http://www.businessdictionary.com/definition/payment-method.html)) (modified)

**PROVIDER CREDENTIALS**

**ADVANCED PRACTICE NURSE –** A registered nurse with advanced training (Masters, Post-masters, or Doctoral degree) and licensed to practice in the state.

*Note:* This includes Nurse-Midwives.

*Credentials:* APN

*AQI XML Schema Element:* <StaffCred>

**ANESTHESIOLOGIST –** A Doctor of Medicine or Osteopathic Medicine with postgraduate specialty training in anesthesiology and licensed by the state to practice medicine.

*Credentials:* MD or DO

*AQI XML Schema Element:* <StaffCred>

*Source:* Mosby's Medical Dictionary, 9th edition. 2009 (modified)

**CERTIFIED ANESTHESIOLOGIST ASSISTANT –** A person who (1) works under the direction of an anesthesiologist; (2) is in compliance with all applicable requirements of State law, including any licensure requirements the State imposes on non-physician anesthetists; and (3) is a graduate of a medical school-based anesthesiologist's assistant education program that (a) is accredited by the Committee on Allied Health Education and Accreditation and (b) includes approximately two years of specialized basic science and clinical education in anesthesia at a level that builds on a premedical undergraduate science background.

*Credentials:* CAA (previously called AA)

*AQI XML Schema Element:* <StaffCred>

*Source:* CMS Manual 2010

**CERTIFIED REGISTERED NURSE ANESTHETIST** – A registered nurse who (1) is licensed as a registered professional nurse by the State in which the nurse practices; (2) meets any licensure requirements the State imposes with respect to non-physician anesthetists; (3) has graduated from a nurse anesthesia educational program that meets the standards of the Council on Accreditation of Nurse Anesthesia Programs, or such other accreditation organization as may be designated by the Secretary; and (4) meets the following criteria: (i) has passed a certification examination of the Council on Certification of Nurse Anesthetists, the Council on Recertification of Nurse Anesthetists or any other certification organization that may be designated by the Secretary; or (ii) is a graduate of a program described in (3) within 24 months after that graduation

*Synonym:* Nurse Anesthetist

*Credentials:* CRNA

*AQI XML Schema Element:* <StaffCred>

*Source:* CMS Manual 2010

**DENTIST OR ORAL SURGEON** – An individual who is qualified by training and licensed by a state or region to diagnose and treat abnormalities of the teeth, gums, and underlying bone, including conditions caused by disease, trauma, and heredity.

*Credentials:* DDS or DMD

*Note:* Anesthesia may be administered by a dentist or oral surgeon who is qualified to administer anesthesia under State law.

*AQI XML Schema Element:* <StaffCred>

*Source:* Mosby's Dental Dictionary, 2nd edition. © 2008 (modified)

**DENTIST ANESTHESIOLOGIST** – A dentist who has successfully completed an accredited postdoctoral anesthesiology residency training program for dentists of two or more years duration, in accord with Commission on Dental Accreditation's Standards for Dental Anesthesiology Residency Programs, and/or meets the eligibility requirements for examination by the American Dental Board of Anesthesiology.

*Credentials:* DDS or DMD(CMS Taxonomy code: 1223D0004X)

*Source:* Centers for Medicare and Medicaid Services Office of Financial Management / Program Integrity Group / Division of Provider / Supplier Enrollment  
National Uniform Claim Committee  
<http://nucc.org/index.php/code-sets-mainmenu-41/provider-taxonomy-mainmenu-40/code-lookup-mainmenu-50>

#### **DENTIST ANESTHESIOLOGIST RESIDENT**

**RESIDENT (ORAL AND MAXILLOFACIAL SURGEON)** – A Doctor of Dental Surgery or Dental Medicine enrolled in a Commission on Dental Accreditation (CODA)-accredited oral and maxillofacial surgery residency program.

*Credentials:* DDS or DMD

**RESIDENT (DENTIST ANESTHESIOLOGIST)** – A Doctor of Dental Surgery or Dental Medicine enrolled in a Commission on Dental Accreditation (CODA)-accredited postdoctoral dental anesthesiology residency program.

*Credentials:* DDS or DMD

**FELLOW (ANESTHESIOLOGY)** – A Doctor of Medicine or Osteopathic Medicine who has completed postgraduate residency training in anesthesiology and is participating in a subspecialty training program.

*Credentials:* MD or DO

*AQI XML Schema Element:* <StaffCred>

*Source:* Farlex Partner Medical Dictionary 2012 (modified)

**PHYSICIAN ASSISTANT** – A graduate of an accredited Physician Assistant education program that is in compliance with all applicable requirements of State law and who can practice medicine under the supervision of a licensed doctor of medicine or osteopathy.

*Credentials:* PA

*AQI XML Schema Element:* <StaffCred>

**PODIATRIST** – A health professional who diagnoses and treats disorders of the feet.

*Credentials:* DPM

*Note:* Anesthesia may be administered by podiatrist who is qualified to administer anesthesia under State law.

*AQI XML Schema Element:* <StaffCred>

*Source:* Mosby's Medical Dictionary, 9th edition. 2009

**REGISTERED NURSE** – A graduate trained nurse who has passed a state registration examination and has been licensed to practice nursing

*Credentials:* RN

*AQI XML Schema Element:* <StaffCred>

*Source:* The American Heritage Medical Dictionary, 2007

**RESIDENT (ANESTHESIA)** – A Doctor of Medicine or Osteopathic Medicine who is participating in an accredited postgraduate residency training program.

*Credentials:* MD or DO

*AQI XML Schema Element:* <StaffCred>

**STUDENT REGISTERED NURSE ANESTHETIST** – A registered nurse in a nurse anesthesia educational program accredited by the Council on Accreditation of Nurse Anesthesia Programs who provides anesthesia services under the supervision of qualified clinical instructors, including CRNAs and/or anesthesiologists

*Credentials:* SRNA

*AQI XML Schema Element:* <StaffCred>

**SURGEON** – A Doctor of Medicine or Osteopathic Medicine with postgraduate specialty training in surgery or a surgical subspecialty and licensed by the state to practice medicine.

*Note:* The primary surgeon for the operative procedure should be reported. For some procedures such as CT scan or MRI, this data field may be left blank.

*Credentials:* MD or DO

*AQI XML Schema Element:* <StaffCred>

*Source:* Mosby's Medical Dictionary, 9th edition. 2009 (modified)

**PROVIDER ID** – The practice specific provider/staff identification number generated or used by the anesthesia practice's billing software to indicate the provider/staff that participated in the procedure/case

*Note:* This ID number is not the identifiable Staff ID, staff name, staff NPI, staff social security number, or any other easily identifiable number. It must, however, be the same as provided in the practice survey provided to AQI/NACOR.

*AQI XML Schema Element:* <StaffID>

**PROVIDER NPI NUMBER** – The standard unique health identifier for health care providers as mandated by the Health Insurance Portability and Accountability (HIPAA) Act of 1996

*Note:* NPI = National Provider Identification.

*AQI XML Schema Element:* <NPI>

*Source:* Health and Human Services (HHS) as mandated by the Health Insurance Portability and Accountability Act of 1996 (HIPAA)

**UNIQUE ANESTHESIA EPISODE OF CARE ID** – The primary key number internally generated by the anesthesia practice from the billing or electronic medical/health record related to the episode of anesthetic care. This is not the identifiable medical record number

*Note:* This refers to the anesthesia case ID for the episode of care.

*AQI XML Schema Element:* <AnesthesiaRecordID>

## ADMINISTRATIVE DATA ELEMENTS

### ADMISSION STATUS

**INPATIENT** – Admission to an in-patient healthcare facility prior to or after the therapeutic or diagnostic procedure as a result of a physician's order

*Synonym:* Admitted

*Note:* Includes same day admit patients.

*AQI XML Schema Element:* <AdmissionStatus>

*Source:* CMS

**OBSERVATION** – A therapeutic or diagnostic procedure is performed in a healthcare facility without a physician's admission order

*Synonym:* Overnight recovery

*Note:* The patient stays in an in-patient facility overnight (at least one midnight) but does not have a physician's order for admission. A patient who is in the hospital (without admission orders) with an expected stay of one midnight is an observation patient and an outpatient.

*AQI XML Schema Element:* <AdmissionStatus>

*Source:* CMS

**AMBULATORY** – A therapeutic or diagnostic procedure performed in a healthcare facility that does not require an overnight stay (less than 24 hours of care)

*Synonyms:* Day surgery, same-day surgery, outpatient

*AQI XML Schema Element:* <AdmissionStatus>

*Source:* CMS

### COVERAGE CODE

*Note:* The conceptual definitions for these data elements are based on CMS billing codes.

**MD-ALONE** – The physician (a) personally performed the entire anesthesia service alone; or (b) is involved with one anesthesia case with a resident (physician is a teaching physician); or (c) is continuously involved in a single case involving a student nurse anesthetist; or (d) is working with a CRNA or AA in one anesthesia case and the services of each are found to be medically necessary

*Note:* Personally performed; applies to DOs as well as MDs.

*Medicare Anesthesia Documentation Modifier:* AA-Anesthesia services performed personally by an anesthesiologist

*AQI XML Schema Element:* <CoverageCode>

*Source:* CMS Medicare Claims Processing Manual, Chapter 12 (rev.3476, 03-111-16)

**MD-DIRECTING** – The physician (a) performs and documents a pre-anesthetic examination and evaluation; and (b) prescribes and documents the anesthesia plan; and (c) personally participates in the most demanding procedures in the anesthesia plan, including induction and emergence, and documents this participation; and (d) ensures that any procedures in the anesthesia plan that he or she does not perform are performed by a qualified anesthetist; and (e) monitors the course of anesthesia administration at frequent intervals; and (f) remains physically present and available for immediate diagnosis and treatment of emergencies; and (g) provides and documents indicated-post-anesthesia care for two, three or four concurrent procedures involving qualified individuals, all of whom could be CRNAs, AAs, SRNAs, interns, residents or combinations of these individuals.

A physician who is concurrently directing the administration of anesthesia to not more than four surgical patients cannot ordinarily be involved in furnishing additional services to other patients. However, addressing an emergency of short duration in the immediate area, administering an epidural or caudal anesthetic to ease labor pain, or periodic, rather than continuous, monitoring of an obstetrical patient does not substantially diminish the scope of control exercised by the physician in directing the administration of anesthesia to surgical patients. It does not constitute a separate service for the purpose of determining whether the medical direction criteria are met. Further, while directing concurrent anesthesia procedures, a physician may receive patients entering the operating suite for the next surgery, check or discharge patients in the recovery room, or handle scheduling matters without affecting fee schedule payment. (Chapter 12 Section 50C of the claims processing manual)

*Note:* Applies to DOs as well as MDs.

*Medicare Anesthesia Documentation Modifier:* QK--Medical direction by a physician of two, three, or four concurrent anesthesia procedures; QY--Medical direction of one CRNA/CAA by an anesthesiologist

*AQI XML Schema Element:* <CoverageCode>

*Source:* CMS Medicare Claims Processing Manual, Chapter 12 (rev.3476, 03-111-16)

**MD PRESENT BUT NOT DIRECTING** – The physician is working with one or more CRNAs but does not fulfill or does not document all of the requirements for Medical Direction.

*Note:* Applies to DOs as well as MDs.

*Medicare Anesthesia Documentation Modifier:* There is no current Medicare Documentation Modifier for this.

*AQI XML Schema Element:* <CoverageCode>

**MD-SUPERVISING** – The physician is involved in more than four concurrent cases.

*Note:* Applies to DOs as well as MDs.

*Medicare Anesthesia Documentation Modifier:* AD--Medically supervised by a physician, more than four concurrent anesthesia procedures

*AQI XML Schema Element:* <CoverageCode>

*Source:* CMS Medicare Claims Processing Manual, Chapter 12 (rev.3476, 03-111-16), modified

**CRNA-ALONE** – The CRNA provides legally authorized anesthesia services without medical direction by a physician

*Medicare Anesthesia Documentation Modifier:* QZ—CRNA service; provides anesthesia care without medical direction by a physician

*AQI XML Schema Element:* <CoverageCode>

*Source:* CMS Medicare Claims Processing Manual, Chapter 12 (rev.3476, 03-111-16), modified

**CRNA-DIRECTED** – The CRNA participates in a single anesthesia procedure which involves physician medical direction services

*Medicare Anesthesia Documentation Modifier:* QX--CRNA service with medical direction by a physician

*AQI XML Schema Element:* <CoverageCode>

*Source:* CMS Medicare Claims Processing Manual, Chapter 12 (rev.3476, 03-111-16), modified

**CRNA-SUPERVISED** – The CRNA participates in a single anesthesia procedure which involves physician medical supervision services

*Medicare Anesthesia Documentation Modifier:* There is no current Medicare Documentation Modifier for this.

*AQI XML Schema Element:* <CoverageCode>

*Source:* CMS Medicare Claims Processing Manual, Chapter 12 (rev.3476, 03-111-16), modified

**CRNA-SUPERVISING** – The teaching CRNA supervises a single case involving a student nurse anesthetist where the CRNA is continuously present and the teaching CRNA is not medically directed by an anesthesiologist

*Synonym:* Teaching CRNA

*Medicare Anesthesia Documentation Modifier:* There is no current Medicare Documentation Modifier for this.

*AQI XML Schema Element:* <CoverageCode>

*Source:* CMS Medicare Claims Processing Manual, Chapter 12 (rev.3476, 03-111-16), modified

**CAA-DIRECTED** – The Certified Anesthesiologist Assistant (CAA) participates in a single anesthesia procedure which involves physician medical direction services

*Medicare Anesthesia Documentation Modifier:* QX--CAA service with medical direction by a physician

*AQI XML Schema Element:* <CoverageCode>

*Source:* CMS Medicare Claims Processing Manual, Chapter 12 (rev.3476, 03-111-16), modified

**MD-MD** – The teaching anesthesiologist is involved in the training of a resident in a single anesthesia case, two concurrent anesthesia cases involving residents, or a single anesthesia case involving a resident that is concurrent to another case paid under the medical direction rules

*Note:* Teaching anesthesiologist directing an anesthesiology resident; also applies to MD-DO, DO-DO, and DO-MD.



*Medicare Anesthesia Documentation Modifier:* AA and QC--Teaching physician involved in the training of physician residents in up to two concurrent cases, or the training of physician residents in one case that is concurrent to another case paid under Medical Direction.

The GC modifier is reported by the teaching physician to indicate he/she rendered the service in compliance with the teaching physician requirements in §100.1.2. One of the payment modifiers must be used in conjunction with the GC modifier. (Chapter 12, Section 50K)

The teaching anesthesiologist should use the "AA" modifier and the "GC" certification modifier to report such cases. See §50 B. and §0 K. (Chapter 12, Section 100.1.2 A 4)

*AQI XML Schema Element:* <CoverageCode>

*Source:* CMS Medicare Claims Processing Manual, Chapter 12 (rev.3476, 03-111-16), modified

**LOCATION** – A particular place or setting where the procedure was performed

*Note:* Perioperative care may have been provided in more than one setting. The setting (location) of where the actual procedure, exclusive of any pre-op or post-op care, was performed should be reported.

*Source:* Merriam-Webster's Dictionary, modified

**AMBULANCE-LAND** – A land vehicle specifically designed, equipped and staffed for lifesaving and transporting the sick or injured

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**AMBULATORY SURGICAL CENTER** – A freestanding facility, other than a physician's office, where surgical and diagnostic services are provided on an ambulatory basis

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**ASSISTED LIVING FACILITY** – Congregate residential facility with self-contained living units providing assessment of each resident's needs and on-site support 24 hours a day, 7 days a week, with the capacity to deliver or arrange for services including some health care and other services

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**BIRTHING CENTER** – A facility, other than a hospital's maternity facilities or a physician's office, which provides a setting for labor, delivery, and immediate post-partum care as well as immediate care of new born infants

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**COMMUNITY MENTAL HEALTH CENTER** – A facility that provides the following services: outpatient services, including specialized outpatient services for children, the elderly, individuals who are chronically ill, and residents of the CMHC's mental health services area who have been discharged from inpatient treatment at a mental health facility; 24 hour a day emergency care services; day treatment, other partial hospitalization services, or psychosocial rehabilitation services; screening for patients being considered for admission to State mental health facilities to determine the appropriateness of such admission; and consultation and education services

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**COMPREHENSIVE INPATIENT REHABILITATION FACILITY** – A facility that provides comprehensive rehabilitation services under the supervision of a physician to inpatients with physical disabilities. Services include physical therapy, occupational therapy, speech pathology, social or psychological services, and orthotics and prosthetics services

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**COMPREHENSIVE OUTPATIENT REHABILITATION FACILITY** – A facility that provides comprehensive rehabilitation services under the supervision of a physician to outpatients with physical disabilities. Services include physical therapy, occupational therapy, and speech pathology services

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**CUSTODIAL CARE FACILITY** – A facility which provides room, board and other personal assistance services, generally on a long-term basis, and which does not include a medical component

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**EMERGENCY ROOM HOSPITAL** – A portion of a hospital where emergency diagnosis and treatment of illness or injury is provided

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**FEDERALLY QUALIFIED HEALTH CENTER** – A facility located in a medically underserved area that provides Medicare beneficiaries preventive primary medical care under the general direction of a physician

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**GROUP HOME** – A residence, with shared living areas, where clients receive supervision and other services such as social and/or behavioral services, custodial service, and minimal services (e.g., medication administration)

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**HOME** – Location, other than a hospital or other facility, where the patient receives care in a private residence

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**HOMELESS SHELTER** – A facility or location whose primary purpose is to provide temporary housing to homeless individuals (e.g., emergency shelters, individual or family shelters)

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**HOSPICE** – A facility, other than a patient's home, in which palliative and supportive care for terminally ill patients and their families are provided

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**INDEPENDENT CLINIC** – A location, not part of a hospital and not described by any other Place of Service code, that is organized and operated to provide preventive, diagnostic, therapeutic, rehabilitative, or palliative services to outpatients only

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**INDEPENDENT LABORATORY** – A laboratory certified to perform diagnostic and/or clinical tests independent of an institution or a physician's office

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**INDIAN HEALTH SERVICE (FREE-STANDING FACILITY)** – A facility or location, owned and operated by the Indian Health Service, which provides diagnostic, therapeutic (surgical and non-surgical), and rehabilitation services to American Indians and Alaska Natives who do not require hospitalization

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**INDIAN HEALTH SERVICE (PROVIDER-BASED FACILITY)** – A facility or location, owned and operated by the Indian Health Service, which provides diagnostic, therapeutic (surgical and non-surgical), and rehabilitation services rendered by, or under the supervision of, physicians to American Indians and Alaska Natives admitted as inpatients or outpatients

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**IN-PATIENT** – A facility, other than psychiatric, which primarily provides diagnostic, therapeutic (both surgical and nonsurgical), and rehabilitation services by, or under, the supervision of physicians to patients admitted for a variety of medical conditions

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**INPATIENT PSYCHIATRIC FACILITY** – A facility that provides inpatient psychiatric services for the diagnosis and treatment of mental illness on a 24-hour basis, by or under the supervision of a physician

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**MASS IMMUNIZATION CENTER** – A location where providers administer pneumococcal pneumonia and influenza virus vaccinations and submit these services as electronic media claims, paper claims, or using the roster billing method. This generally takes place in a mass immunization setting, such as, a public health center, pharmacy, or mall but may include a physician office setting

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**MILITARY TREATMENT FACILITY** – A medical facility operated by one or more of the Uniformed Services. Military Treatment Facility (MTF) also refers to certain former U.S. Public Health Service (USPHS) facilities now designated as Uniformed Service Treatment Facilities (USTF)

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**MOBILE UNIT** – A facility/unit that moves from place-to-place equipped to provide preventive, screening, diagnostic, and/or treatment services

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**NURSING FACILITY** – A facility which primarily provides to residents skilled nursing care and related services for the rehabilitation of injured, disabled, or sick persons, or, on a regular basis, health-related care services above the level of custodial care to other than mentally retarded individuals

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**OFFICE** – Location, other than a hospital, skilled nursing facility (SNF), military treatment facility, community health center, State or local public health clinic, or intermediate care facility (ICF), where the health professional routinely provides health examinations, diagnosis, and treatment of illness or injury on an ambulatory basis

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**OUTPATIENT HOSPITAL (OFF CAMPUS)** – A portion of an off-campus hospital provider based department which provides diagnostic, therapeutic (both surgical and nonsurgical), and rehabilitation services to sick or injured persons who do not require hospitalization or institutionalization

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**OUTPATIENT HOSPITAL (ON CAMPUS)** – A portion of a hospital’s main campus which provides diagnostic, therapeutic (both surgical and nonsurgical), and rehabilitation services to sick or injured persons who do not require hospitalization or institutionalization

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**PHARMACY** – A facility or location where drugs and other medically related items and services are sold, dispensed, or otherwise provided directly to patients

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**PRISON/CORRECTIONAL FACILITY** – A prison, jail, reformatory, work farm, detention center, or any other similar facility maintained by either Federal, State or local authorities for the purpose of confinement or rehabilitation of adult or juvenile criminal offenders

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**PSYCHIATRIC RESIDENTIAL TREATMENT CENTER** – A facility or distinct part of a facility for psychiatric care which provides a total 24-hour therapeutically planned and professionally staffed group living and learning environment

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**PUBLIC HEALTH CLINIC** – A facility maintained by either State or local health departments that provides ambulatory primary medical care under the general direction of a physician

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**RESIDENTIAL SUBSTANCE ABUSE TREATMENT FACILITY** – A facility which provides treatment for substance (alcohol and drug) abuse to live-in residents who do not require acute medical care. Services include individual and group therapy and counseling, family counseling, laboratory tests, drugs and supplies, psychological testing, and room and board

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**RURAL HEALTH CLINIC** – A certified facility which is located in a rural medically underserved area that provides ambulatory primary medical care under the general direction of a physician

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**SCHOOL** – A facility whose primary purpose is education

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**SKILLED NURSING FACILITY** – A facility which primarily provides inpatient skilled nursing care and related services to patients who require medical, nursing, or rehabilitative services but does not provide the level of care or treatment available in a hospital

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**URGENT CARE FACILITY** – Location, distinct from a hospital emergency room, an office, or a clinic, whose purpose is to diagnose and treat illness or injury for unscheduled, ambulatory patients seeking immediate medical attention

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**WALK-IN RETAIL HEALTH CLINIC** – A walk-in health clinic, other than an office, urgent care facility, pharmacy or independent clinic and not described by any other Place of Service code, that is located within a retail operation and provides, on an ambulatory basis, preventive and primary care services

*AQI XML Schema Element:* <LocationType>

*Source:* CMS Place of Service Codes for Professional Claims Aug 6, 2015

**PATIENT CHARACTERISTICS** – Selected attributes of a patient.

**HEIGHT** – Vertical measurement of the patient

*AQI XML Schema Element:* <Height> inches  
<HeightInCm> cm

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)

**WEIGHT** – The apparent mass of the patient's body

*AQI XML Schema Element:* <Weight> lbs  
<WeightInKg> Kg

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)

## PROCEDURE STATUS

**EMERGENCY** – A surgical, therapeutic, or diagnostic procedure that cannot be delayed without causing a significant risk of death or permanent impairment

*Synonym:* Emergent surgery

*Note:* The ASA Physical Status should include "E". The designation of a procedure as an emergency is determined by a surgeon and/or an anesthesiologist.

*AQI XML Schema Element:* <ProcStatus>

**URGENT** – A surgical, therapeutic, or diagnostic procedure that must be performed to prevent death or permanent impairment but that can be delayed

*Note:* The procedure may be delayed to allow for medical optimization of the patient or to permit better availability of resources (ex., personnel or equipment).

*AQI XML Schema Element:* <ProcStatus>

**ELECTIVE** – A surgical, therapeutic, or diagnostic procedure that can be performed at any time or date with an agreement between the surgeon and the patient

*AQI XML Schema Element:* <ProcStatus>

## TIME

**ANESTHESIA INDUCTION TIME** – Time when the anesthesiologist begins the administration of agents intended to provide the level of anesthesia required for the scheduled procedure

*AQI XML Schema Element:* <TMType:AnesthesiaInductionStartTime>

*Source:* AACD Procedural Times Glossary (1991)

**ANESTHESIA READY TIME** – Time at which the patient has a sufficient level of anesthesia established to begin surgical preparation of the patient, and remaining anesthetic chores do not preclude positioning and prepping the patient

*AQI XML Schema Element:* <TMType:StartTime>

*Source:* AACD Procedural Times Glossary (1991)

**PATIENT-IN-ROOM TIME** - the time at which the patient physically enters the room in which the surgery or diagnostic or therapeutic procedure will be performed.

*Synonyms:* Wheels in time, patient into OR

*Note:* Time should be reported in the local time zone. (This data element is not part of the Minimum Data Set.)

*Source:* AACD Procedural Times Glossary (1991)

**PATIENT-OUT-OF-ROOM TIME** - the time at which the patient physically leaves the room in which the surgery or diagnostic or therapeutic procedure was performed.

*Synonyms:* Wheels out time, patient out of the OR

*Note:* Time should be reported in the local time zone. (This data element is not part of the Minimum Data Set.)

*Source:* AACD Procedural Times Glossary (1991)

**PROCEDURE/SURGERY START TIME** – Time the procedure is started

*AQI XML Schema Element:* <ProcStartTime>

*Source:* AACD Procedural Times Glossary (1991)

**PROCEDURE/SURGERY FINISH TIME** – Time when all instrument and sponge counts are completed and verified as correct; all post-op radiological studies to be done in the OR are completed; all dressings and drains are secured; and the physician/surgeons have completed all procedure related activities on the patient

*AQI XML Schema Element:* <ProcEndTime>

*Source:* AACD Procedural Times Glossary (1991)

**ARRIVAL IN PACU/ICU TIME** – Time of patient arrival in PACU or ICU

*AQI XML Schema Element:* <TMType:StartTime>

*Source:* AACD Procedural Times Glossary (1991)

**READY FOR DISCHARGE FROM PACU/ICU TIME** – Time that the patient is assessed to be ready for discharge from the PACU or ICU

*Note:* This is the time that the patient has been assessed and met criteria for discharge and care by the anesthesiologist has been concluded and care transferred to another medical service.

*AQI XML Schema Element:* <TMType:StartTime>

*Source:* AACD Procedural Times Glossary (1991)

**DISCHARGE FROM PACU/ICU TIME** – Time that the patient is transported out of PACU or ICU

*AQI XML Schema Element:* <TMType:StartTime>

*Source:* AACD Procedural Times Glossary (1991)



## OUTCOME DATA ELEMENTS

**OUTCOME** – An adverse event that reached the patient and may or may not have resulted in harm

**ACIDEMIA** – The accumulation of excess hydrogen ions or depletion of alkaline reserve (bicarbonate content) in the blood resulting in an arterial blood pH < 7.35

*Note:* Acidemia may result from a metabolic and/or respiratory acidosis.

*AQI XML Schema Element:* <OutcomeID>

**ACUTE KIDNEY INJURY (AKI)** – New kidney damage or a sudden decrease in kidney function. Criteria include:

1. Increase in serum creatinine (Cr)  $\geq 0.3$  mg/dl within 48 hours
2. Increase in Cr to  $\geq 1.5$  times baseline, which is known or presumed to have occurred within the prior 7 days

*AQI XML Schema Element:* <OutcomeID>

*Source:* Kidney Disease: Improving Global Outcomes (KDIGO); KDIGO Clinical Practice Guideline for Acute Kidney Injury March 2012 (modified)

**ADVERSE DRUG REACTION (ADR)** – Any unexpected, unintended, undesired, or excessive response to a drug that requires discontinuing the drug (therapeutic or diagnostic), changing the drug therapy, or modifying the dose (except for minor dosage adjustments). The adverse reaction must be severe enough that it requires prolonged observation or stay in a health care facility, necessitates supportive treatment, negatively affects prognosis, or results in temporary or permanent harm, disability, or death.

*Synonym:* ADR

*Note:* All noxious and unintended responses to a medicinal product related to any dose should be considered adverse drug reactions per the US FDA Guideline for Industry, Clinical Safety Data Management: Definitions and Standards for Expedited Reporting.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Health-System Pharmacists. ASHP guidelines on adverse drug reaction monitoring and reporting. *Am J Health-Syst Pharm* 1995;52:417-419; US Federal Drug Administration Guidelines for Industry, Clinical Safety Data Management

**AIRWAY OBSTRUCTION** – An acute respiratory dysfunction that produces reduced airflow into the alveoli and an arterial oxygen saturation less than 90% and that results in bradycardia or other clinical signs of hypoxia; the obstruction can be anatomically localized (e.g., tumor, stricture, foreign body, laryngospasm) or generalized (e.g., bronchospasm, asthma)

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary for the Health Professions and Nursing, 7th ed. (modified)

**AIRWAY TRAUMA** – An injury to any of the structures or tissues of the mouth, nasopharynx, oropharynx, or larynx resulting from the use of any airway device such as laryngoscope, oral or nasal airway, endotracheal tube, or stylet

*Note:* The most common injury is to the teeth, but airway trauma includes other injuries such as mucosal tears or tongue lacerations.

*AQI XML Schema Element:* <OutcomeID>

**AMNIOTIC FLUID EMBOLISM** – An obstetric emergency resulting from amniotic fluid, fetal cells, hair, or other debris that enters the maternal circulation via placental vessels and triggers an immune reaction.

*Synonym:* AFE

*AQI XML Schema Element:* <OutcomeID>

**ANAPHYLAXIS** – A severe, life-threatening allergic response, which is rapid in onset and characterized by a sudden drop in blood pressure and/or respiratory insufficiency

*Note:* Elevated serum tryptase level may be used to confirm the diagnosis. Although anaphylaxis is a life-threatening allergic reaction, there may be other manifestations such as urticaria, bronchospasm, and edema. Epinephrine is often required as part of the treatment.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**ARRHYTHMIA** – New onset of an abnormality of the cardiac rhythm; a cardiac rhythm other than normal sinus rhythm, including atrial fibrillation, atrial flutter, ventricular tachycardia, ventricular fibrillation, 2nd or 3rd degree heart block

*Synonym:* Irregular heartbeat

*Note:* A disorder in which there is abnormal electrical activity in the heart.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**ASPIRATION** – The entry of material (e.g., food, liquid, gastric contents) into the respiratory tract and accompanied by consistent radiologic findings

*Synonym:* Perioperative aspiration

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**AWARENESS** – A scenario in which a patient becomes conscious during a procedure performed under general anesthesia and subsequently has recall of these events

*Synonym:* Intraoperative awareness, awareness under anesthesia, recall of intraoperative events

*Note:* Awareness should be limited to explicit memory and should not include the time before general anesthesia is fully induced or the time of emergence from general anesthesia or during an intraoperative "wake-up test", when arousal and return of consciousness are intended.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**BRADYCARDIA** – Significant slowness of the heart rate that poses a threat to the patient and requires treatment.

*Note:* The heart rate that is considered bradycardic depends on the patient's age and coexisting medical conditions.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**BURN INJURY** – Unintentional damage to tissue caused by excessive heat; a lesion caused by fire, heat or any other cauterizing agent, including friction, caustic agents, electricity, radiation, or electromagnetic energy

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**CANNOT VENTILATE** – Inability to force oxygen into the trachea and alveoli for the purpose of oxygenating the blood in the pulmonary capillaries and removing carbon dioxide

*Note:* Inability to generate an adequate tidal volume or produce active movement of oxygen into the trachea and alveoli despite multiple attempts despite instituting corrective actions such as changing head and neck positions, use of jaw thrust or airway devices such as oral or nasal airways or placement of a laryngeal mask airway or other supraglottic airway device. CANNOT VENTILATE may occur in patients with a tracheostomy when positive pressure does not produce active movement of oxygen into the trachea and alveoli.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**CARDIAC ARREST** – The unplanned cessation of the mechanical activity of the heart as confirmed by the absence of signs of effective circulation. Cardiac compression and/or defibrillation may be required for treatment.

*Synonyms:* Perioperative cardiac arrest, cardiopulmonary arrest, circulatory arrest

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified); Anesthesia Quality Institute 2016 Qualified Clinical Data Registry (AQI QCDR). Feb 8, 2016 (modified).

**CASE CANCELLED BEFORE ANESTHESIA START TIME<sup>1</sup>** – A scheduled procedure that is not performed on the scheduled procedure day and the decision not to perform the procedure takes place before Anesthesia Start Time<sup>1</sup>.

*Synonyms:* Surgery cancellation, cancelled operative procedure

*Note:* The decision to cancel the scheduled procedure or operation may be made by the patient, the institution or insurance company, the surgeon (proceduralist) or the anesthesiologist.

*AQI XML Schema Element:* <OutcomeID>

**CASE CANCELLED BEFORE ANESTHESIA INDUCTION TIME** – A scheduled procedure that is not performed on the scheduled procedure day and the decision not to perform the procedure takes place after Anesthesia Start Time<sup>1</sup> but before Anesthesia Induction Time.

*Synonyms:* Aborted surgery, surgery cancellation, cancelled operative procedure

*Note:* The decision to cancel (abort) the scheduled procedure or operation may be made by the surgeon (proceduralist) or the anesthesiologist.

*AQI XML Schema Element:* <OutcomeID>

**CASE CANCELLED AFTER ANESTHESIA INDUCTION TIME** – A scheduled procedure that is not performed on the scheduled procedure day and the decision not to perform the procedure takes place after Anesthesia Induction Time but before Procedure/Surgery Start Time.

*Synonyms:* Aborted surgery, surgery cancellation, cancelled operative procedure

*Note:* The decision to cancel (abort) the scheduled procedure or operation may be made by the surgeon (proceduralist) or the anesthesiologist.

*AQI XML Schema Element:* <OutcomeID>

**CASE DELAY** – The Surgery/Procedure Start Time occurs significantly later than expected in the context of institutional norms.

*Note:* Case delays may be due to patient issues (e.g., late arrival, insurance problems, abnormal lab values), system issues (e.g., test results unavailable, blood unavailable, equipment malfunction or unavailable, transport delay), or practitioner issues (e.g., no consent obtained, surgery, nursing or anesthesia personnel arrived late).

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

*AQI XML Schema Element: <OutcomeID>*

**CENTRAL LINE-ASSOCIATED BLOODSTREAM INFECTION (CLABSI)** – A primary bloodstream infection that develops in a patient with a central line in place within the 48-hour period prior to the infection onset.

Criteria for diagnosis include any of the following:

- Criteria 1: Patient has a recognized pathogen cultured from one or more blood cultures AND organism cultured from blood is NOT related to an infection at another site.
- Criteria 2: Patient has at least one of the following signs or symptoms: fever (>38 degrees C), chills or hypotension AND signs and symptoms and positive laboratory results (two or more positive blood cultures drawn on separate occasions) are NOT related to an infection at another site
- Criteria 3: Patient < 1 year of age has at least one of the following signs or symptoms: fever (> 38 degrees C core), hypothermia (<36 degrees core), apnea, or bradycardia AND signs and symptoms and positive laboratory results (two or more positive blood cultures drawn on separate occasions) are NOT related to an infection at another site

*AQI XML Schema Element: <OutcomeID>*

*Source:* Centers for Disease Control and Prevention Central Line–Associated Bloodstream Infection (CLABSI) Surveillance 2013 (modified); The Joint Commission. Preventing Central Line–Associated Bloodstream Infections: A Global Challenge, a Global Perspective. Oak Brook, IL: Joint Commission Resources, May 2012 (modified).

**CENTRAL LINE PLACEMENT INJURY** – A pneumothorax, hemothorax, or thoracic duct, cardiac, or vascular injury that results from an attempted or completed insertion of a central venous catheter.

*AQI XML Schema Element: <OutcomeID>*

*Source:* Anesthesia Quality Institute 2016 Qualified Clinical Data Registry (AQI QCDR). Feb 8, 2016 (modified).

**CEREBROVASCULAR ACCIDENT** – The sudden death of neurons in a localized area of brain due to inadequate blood flow that produces motor, sensory, or cognitive dysfunction (e.g., hemiplegia, hemiparesis, aphasia, sensory deficit, impaired memory) that persists for more than 24 hours.

*Synonyms:* CVA, stroke

*Note:* Imaging may be used for confirmation and to rule out other central nervous system pathology.

*AQI XML Schema Element: <OutcomeID>*

**COAGULOPATHY** – The impairment, inability or incapacity of the blood to form clots and is associated with clinical bleeding.

*Note:* Coagulopathy is a disorder involving the elements of blood coagulation, including platelets, coagulation factors and inhibitors, and the fibrinolytic system and may be confirmed by abnormal tests of clotting (PT, INR, PTT) or decreased platelet count.

*AQI XML Schema Element: <OutcomeID>*

*Source:* Stedman's Medical Dictionary. 28th ed.; Hunt, Beverley J. Bleeding and Coagulopathies in Critical Care NEJM 2014;370(9): 847–859.

**COMA** – A state of profound unconsciousness, not present prior to the initiation of anesthetic care, in which the individual cannot be awakened, fails to respond normally to external stimuli, and does not initiate voluntary actions. Exclude coma due to prolonged anesthetic effect or hypothermia (temp <34 degrees C).

*Note:* Scenarios include profound unconsciousness following anoxic or ischemic events such as cardiac arrest; metabolic encephalopathy; thromboembolic event; or cerebral hemorrhage.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified).

**CORNEAL INJURY** – A corneal injury is either a corneal abrasion (a scratch or scrape on the cornea, the clear front window of the eye that transmits and focuses light into the eye) or exposure keratitis (inflammation of the cornea from drying of the corneal tear film).

*Synonyms:* Exposure keratitis, exposure keratopathy

*Note:* Includes both exposure keratitis and corneal abrasion (diagnosed in any manner including with fluorescein examination of the cornea under ultraviolet light). Also includes any new symptom of eye pain treated with topical antibiotic (e.g., erythromycin) while in the post-anesthesia care unit/recovery area. Other causes of eye pain (e.g., acute angle-closure glaucoma) can be excluded by instilling one drop of local anesthetic (e.g., proparacaine) into the eye. If the pain is immediately and completely relieved, corneal injury is confirmed, and acute angle-closure glaucoma is excluded.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Anesthesia Quality Institute 2016 Qualified Clinical Data Registry (AQI QCDR). Feb 8, 2016 (modified); MedicineNet.Com

**DEATH** – The irreversible cessation of all vital functions as indicated by permanent stoppage of the heart, respiration, and brain activity; the end of life.

*Synonym:* Mortality

*Note:* Excludes ASA 6 patients.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified); Anesthesia Quality Institute 2016 Qualified Clinical Data Registry (AQI QCDR). Feb 8, 2016 (modified).

**DEEP VEIN THROMBOSIS** – One or more blood clots (thrombus) within a large vein, usually in the thigh or calf.

*Synonym:* DVT

*AQI XML Schema Element:* <OutcomeID>

**DELAYED EMERGENCE** – Failure of the patient to recover consciousness or normal function within 60 minutes after discontinuing the administration of anesthetic drugs used to produce sedation or general anesthesia; this condition often requires the escalation of planned care.

*Synonyms:* Delayed emergence from anesthesia, prolonged emergence, delayed awakening

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)

**DELIRIUM** – An altered state of consciousness marked by confusion, disorientation or temporary memory dysfunction, difficulty in sustained attention to stimuli, disordered thinking and perception. There must be evidence from the history, physical examination, or laboratory findings that the disturbance is caused by the direct physiological consequences of a general medical condition or that the condition developed during substance intoxication, or during or shortly after, a withdrawal syndrome.

*Synonyms:* Intensive care unit delirium, delirium tremens, alcohol withdrawal, organic brain syndrome, acute confusional state, acute encephalopathy, acute organic reaction, acute psycho-organic syndrome

*Note:* Delirium may be hyperactive, hypoactive, or mixed. It is a change in mentation that may be present immediately after awakening from general anesthesia or sedation or may begin at a later time in the postoperative period. There are several tests that have been developed and validated to diagnose and grade delirium including Confusion Assessment Method (CAM), Delirium Rating Scale Revised-98, and the Delirium Symptom Interview.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) (modified)

**DIFFICULT INTUBATION** – Problematic or challenging insertion of an endotracheal tube into the patient's trachea, requiring at least 3 attempts by one or more skilled individuals.

*Note:* "Difficult intubation" indicates that the endotracheal tube was successfully placed but with greater difficulty, requiring at least 3 attempts.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)

**DIFFICULT MASK VENTILATION** – The inability of an unassisted trained anesthesia provider to maintain the oxygen saturation as measured by pulse oximetry to > 92% or to prevent or reverse signs of inadequate ventilation during positive-pressure mask ventilation.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Langeron et al. Anesthesiology 2000;92:1229 (modified)

**ELECTROLYTE ABNORMALITY** – A physiologic disorder in which there are fewer or more than normal levels (lower or higher concentration) of serum electrolytes (minerals found in the blood, body fluids, and urine necessary for the body to function properly)

*Synonyms:* Electrolyte disorder, electrolyte imbalance

*Clinical scenarios:* hyponatremia, hypernatremia, hypercalcemia, hypocalcemia, hyperkalemia, hypokalemia, hypermagnesemia, hypomagnesemia

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**EMERGENCE DELIRIUM** – A state of mental confusion, agitation and disinhibition associated with hyperexcitability, crying, restlessness and hallucinations occurring during the emergence from general anesthesia.

*Synonyms:* Emergence agitation, emergence excitement

*Note:* Emergence delirium begins shortly after the conclusion of general anesthesia and usually resolves within the first hour.

*AQI XML Schema Element:* <OutcomeID>

**EQUIPMENT/DEVICE FAILURE OR MALFUNCTION** – The medical device did not provide the expected service or was not functioning as per its specifications.

*Note:* This is the accepted national and international definition in the field of patient safety.

*AQI XML Schema Element:* <OutcomeID>

*Source:* The Australian Patient Safety Foundation's Advanced Incident Management System (AIMS) – Australia; Eindhoven University of Technology Eindhoven/PRISMA-Medical Classification Model – The Netherlands; AHRQ Common Formats V1.2

**FAILED INTUBATION** – Inability to insert or pass an endotracheal tube into the trachea.

*Synonym:* Cannot intubate

*Note:* Inability to successfully place an endotracheal tube after making multiple attempts, often using several techniques, laryngoscopes, and other airway equipment. If an emergency surgical airway is required because conventional intubation techniques have been unsuccessful, this should be classified as a failed intubation.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)



**FALL** – A sudden, unintentional downward displacement of a (patient's) body to the floor or other object, excluding those resulting from violence or other purposeful act, with or without a resultant injury.

*AQI XML Schema Element:* <OutcomeID>

*Source:* VA National Center for Patient Safety, Nov2013

**FAT EMBOLISM** – Fat tissue passes into the bloodstream and triggers an immune reaction, hemodynamic instability, or organ damage.

*Note:* Fat embolism may occur with trauma and fracture of or surgery on a large bone like the femur. The clinical signs and symptoms depend on the specific location of the emboli.

*AQI XML Schema Element:* <OutcomeID>

**HEMODYNAMIC INSTABILITY** – An unplanned significant change in global or regional perfusion for more than 30 minutes that may not adequately support normal organ function as indicated by abnormalities in one or more of the following parameters: heart rate, mean arterial blood pressure, or cardiac index that requires treatment with multiple doses or continuous administration of vasoactive agents.

*Note:* In most cases, a significant change is a mean arterial pressure that is more than 20% from baseline or a cardiac index less than 2.0 L/min/m<sup>2</sup>.

*Source:* Baily, J. Hemodynamic instability. GASNet Inc. © 2003 (modified)

*AQI XML Schema Element:* <OutcomeID>

**HIGH SPINAL OR EPIDURAL** – Neuraxial anesthesia in which the level of sensory denervation extends at least to the second thoracic dermatome and that produces hypotension, bradycardia, and/or respiratory insufficiency that requires intubation or ventilatory assistance

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**HYPERCAPNIA** – Abnormally increased arterial carbon dioxide tension greater than 45 mmHg measured in arterial blood at standard temperature

*Synonym:* Hypercarbia

*Note:* Hypercapnia is associated with respiratory acidosis.

*AQI XML Schema Element:* <OutcomeID>

**HYPERGLYCEMIA** – An abnormally high concentration of glucose (greater than 200 mg/dl or 11.1 mmol/l) in the circulating blood

*AQI XML Schema Element:* <OutcomeID>

**HYPERTENSIVE EPISODE** – An unplanned elevation of the systemic arterial blood pressure to a level likely to induce adverse consequences (arbitrarily defined in adults as a systolic or diastolic blood pressure more than 20% above baseline or a systolic pressure greater than 190 mmHg or diastolic pressure greater than 110 mmHg and lasting for more than 10 minutes).

Pediatric HYPERTENSION is determined by the patient's age and body size. The values for:

Full-term newborn systolic pressure is greater than 100 mmHg or diastolic greater than 70 mmHg;

Age 1 to 3 yrs, systolic greater than 114 -120 mmHg or diastolic greater than 66-75 mmHg;

Age 4 to12 yrs, systolic greater than 122-135 mmHg or diastolic greater than 79-91 mmHg

*Synonyms:* High blood pressure (not due to a pre-existing condition), blood pressure spike

*Note:* This does not include hypertension resulting from intentional therapeutic measures that are implemented to increase perfusion to vital organs.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**HYPERTHERMIA** – An unplanned, abnormally increased core body temperature (greater than 38.3 degrees Celsius or 100.9 degrees Fahrenheit);

*AQI XML Schema Element:* <OutcomeID>

**HYPOGLYCEMIA** – An abnormally low concentration of glucose in the circulating blood;

For adults, less than 70 mg/dl;

For neonates, less than 45 mg/dl;

For children (less than age 12 yr), less than 60 mg/dl

*Synonym:* Glucopenia

*AQI XML Schema Element:* <OutcomeID>

**HYPOTENSIVE EPISODE** – An unintentional low systemic arterial blood pressure at a level that may result in inadequate perfusion of critical organs such as the brain, kidney, or heart (arbitrarily defined in adults as a systolic blood pressure less than 20% below the patient's baseline or a systolic blood pressure less than 80 mmHg or a diastolic blood pressure less than 50 mmHg lasting for more than 10 minutes).

*AQI XML Schema Element:* <OutcomeID>

**HYPOXEMIA** – A-persistent abnormal, low partial pressure of oxygen in the arterial blood (less than 60 mmHg measured at standard temperature or an arterial oxygen saturation of less than 90%)

*Note:* The duration of HYPOXEMIA that produces an adverse outcome is dependent on many factors.

*AQI XML Schema Element:* <OutcomeID>

**INADEQUATE PAIN CONTROL** – Ineffective regulation and/or management of an unpleasant sensation associated with actual or potential tissue damage from an acute or chronic condition and mediated by specific nerve fibers to the brain where its conscious appreciation may be modified by various factors

*Note:* This may be reflected by a patient-reported pain score greater than 8 or by a health professional's assessment of the patient's behavior (for example, crying or grimacing) in response to the pain.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary (modified)

**INADEQUATE REVERSAL OF NEUROMUSCULAR BLOCK** – Patient weakness, resulting in inadequate ventilation, swallowing, airway maintenance or insufficient strength, after administration of a medication to counter or neutralize the effect of a previously administered neuromuscular blocking agent (a medication that produces paralysis or weakness by preventing the activation of skeletal muscles by the nervous system at the myoneural junction). INADEQUATE REVERSAL OF NEUROMUSCULAR BLOCK may also occur when no reversal agent was administered because the clinician judged that none was necessary after use of a neuromuscular blocking agent.

*Note:* INADEQUATE REVERSAL OF NEUROMUSCULAR BLOCK can be documented when the train of four (TOF), measured using the ulnar nerve, is less than 0.9.

*Synonym:* Prolonged block

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary (modified)

**INFECTION FOLLOWING EPIDURAL OR SPINAL ANESTHESIA** – Includes (A) Superficial soft tissue infection along the course of an epidural/spinal catheter; (B) Epidural Abscess; (C) Meningitis associated with Central Neuraxial Block; and (D) Epidural Infection with Sepsis

Infectious complications associated with neuraxial anesthesia and analgesia:

- A. Superficial soft tissue infection along the course of an epidural/spinal catheter or needle placement track – Swelling, local erythema and tenderness in combination with any of the following: (a) Fever (>38.0 degrees C); (b) Drainage; (c) Positive culture from the area; and/or (d) Leukocytosis >12/nl or CRP>20 mg/L.
- B. Epidural abscess – Radiological evidence of a mass in the epidural space consistent with an epidural abscess within 30 days following epidural/spinal needle/catheter placement/catheter removal or attempted epidural/spinal placement in combination with any of the following: (a) Fever (>38.0 degrees C); (b) Drainage; (c) Positive culture from surgical exploration or puncture; (d) Leukocytosis >12/nl or CRP>20 mg/L; (e) Local erythema; (f) Local tenderness; (g) Focal back pain; and/or (h) Neurologic deficit.
- C. Meningitis associated with central neuraxial block – Spinal or epidural block (catheter insertion/removal) in the last 72 hours in combination with: (a) New onset of central neurologic symptoms; (b) Headache; (c) Stiff neck; (d) Fever >38.0 degrees C; (e) Positive CSF culture; and/or (f) Meningitis specific antibiotic therapy started.

- D. Epidural infection with sepsis – Diagnostic criteria of superficial soft tissue infection or epidural abscess or Meningitis in combination with positive blood culture with the same organism isolated from puncture site or abscess or clinical diagnosis of sepsis.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM)  
August 2009 Annual Report. Aug 23, 2009

**INFECTION FOLLOWING PERIPHERAL NERVE BLOCK** – Includes: (A) Peripheral Nerve Block Associated with Superficial Soft Tissue Infection; (B) Peripheral Nerve Block Associated with Abscess or Deep Tissue Infection; and (C) Peripheral Nerve Block Associated with Sepsis

- A. Peripheral nerve block associated superficial soft tissue infection – Swelling, local erythema, and tenderness along the catheter or needle placement track in combination with any of the following:
  - a. Fever (> 38.0 degrees C);
  - b. Drainage;
  - c. Positive culture from the area;
  - d. Leukocytosis >12/nl or CRP>20mg/L
- B. Peripheral nerve block associated abscess or deep tissue infection – Evidence of an abscess or fluid collection consistent with an infectious process by imaging or surgical exploration within 30 days following peripheral nerve block needle placement/catheter removal or attempted placement, especially if in combination with any of the following:
  - a. Fever (>38.0 degrees C);
  - b. Neurologic deficit;
  - c. Drainage;
  - d. Positive culture from surgical exploration or puncture;
  - e. Leukocytosis >12/nl or CRP>20 mg/L
- C. Peripheral nerve block associated infection with sepsis – Diagnostic criteria of superficial soft tissue infection or abscess or deep tissue infection in combination with positive blood culture with the same organism isolated from puncture site or abscess or clinical diagnosis of sepsis.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM)  
August 2009 Annual Report. Aug 23, 2009

**INJURY RELATED TO SENSORY OR MOTOR DEFICIT AFTER LOCAL OR REGIONAL ANESTHESIA** - Inadvertent trauma or injury to the patient that occurs after the surgical, diagnostic, or therapeutic procedure is completed and that results from altered sensation (ex., an insensate extremity or area of skin or mucous membrane) or altered motor function produced by infiltration of a local anesthetic, a neuraxial anesthetic or a peripheral nerve block.

*Examples:* Self-induced lip or cheek trauma in pediatric or special needs dental patients after local anesthesia for dental procedures, a fall resulting in a hip fracture after a spinal anesthetic, a burn to the hand after a brachial plexus block.

*Synonyms:* local anesthesia secondary trauma

**ITCHING** – An irritating sensation in the skin or mucous membranes that arouses the desire to scratch or rub the affected bodily areas

*Synonym:* Pruritus

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**IV INFILTRATION** – Leakage of exogenously administered intravenous fluid from a catheter into the tissue surrounding the vein thereby preventing fluid or medications from reaching the circulation and producing the intended effect

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary (modified)

**KIDNEY FAILURE** – Kidney failure is defined as either: (1) a level of GFR to <15 mL/min/1.73 m<sup>2</sup>, which is accompanied in most cases by signs and symptoms of uremia, or (2) a need for initiation of kidney replacement therapy (dialysis or transplantation) for treatment for complications of decreased GFR, which would otherwise increase the risk of mortality and morbidity

*Synonym:* Renal failure

*AQI XML Schema Element:* <OutcomeID>

*Source:* KDIGO Clinical Practice Guideline for Acute Kidney Injury March 2012 (modified)

**LOCAL ANESTHETIC SYSTEMIC TOXICITY** – Major adverse effects observed following injection of a local anesthetic resulting in elevated plasma drug concentration that produces seizures, somnolence, loss of consciousness, respiratory depression/apnea, bradycardia/asystole, or ventricular tachycardia/fibrillation.

*Note:* An elevated plasma drug concentration does not need to be documented.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**MALIGNANT HYPERTHERMIA** – A potentially fatal, inherited disorder usually associated with the administration of volatile anesthetics and/or succinylcholine. The disorder is due to an acceleration of metabolism in skeletal muscles and may produce muscle rigidity, masseter spasm, tachycardia, elevated core temperature, increased carbon dioxide and acid production, and muscle breakdown resulting in myoglobinuria.

*Synonym:* MH

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified); The Malignant Hyperthermia Associated of the United States (modified)

**MEDICATION ERROR** – Any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems, including prescribing; order communication; product labeling, packaging, and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use.

*Synonyms:* Drug error, wrong drug, syringe swaps, look alike vial

*Note:* A medication error is the administration of incorrect medication, incorrect route, or incorrect dosing. Types of medication errors include omission, unauthorized drug, extra dose, wrong dose, wrong dosage form, wrong rate, deteriorated drug, wrong administration technique, wrong time, and drug administered to wrong patient.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified); National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP)

**MULTIPLE ORGAN FAILURE** – Altered function of one or more organs (vital body system) such that homeostasis cannot be maintained without intervention.

*Synonyms:* Multiple organ failure, multisystem organ failure, multiple organ dysfunction syndrome

*Note:* Organ failure may occur in acutely ill patients from sepsis, injury, hypoperfusion (shock), and hypermetabolism.

*AQI XML Schema Element:* <OutcomeID>

**MYOCARDIAL INFARCTION** – Blockage of blood flow in a coronary artery causing damage or death of a portion of the heart muscle. Diagnostic criteria: (ONE from below)

1. Documented ECG changes indicative of acute MI with one or more of the following
  - a. ST elevation > 1 mm in two or more contiguous leads not resolved within 20 minutes
  - b. New left bundle branch block
  - c. New q-wave in two or more contiguous leads
2. New elevation in troponin greater than 3 times the upper level of the reference range in the setting of suspected myocardial infarction.
3. Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality

*Synonym:* Heart attack, MI, acute myocardial infarction, acute MI

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**MYOCARDIAL ISCHEMIA** – A temporary condition in which there is inadequate circulation of blood and transport of oxygen and glucose via the coronary arteries to the heart muscle but does not result in death of myocardium. It may be diagnosed by clinical symptoms of angina, ECG (ST segment or T wave) changes, new myocardial wall motion abnormality, or small increases in troponin.

*Synonym:* Angina

*Note:* ECG manifestations of acute myocardial ischemia (in the absence of left ventricular hypertrophy and left bundle branch block):

- 1) New ST elevation at the J point in two contiguous leads with the cut-points:  $\geq 0.1$  mV in all leads other than leads V<sub>2</sub>-V<sub>3</sub> where the following cut-points apply:  $\geq 0.2$  mV in men  $\geq 40$  years;  $\geq 0.25$  mV in men  $< 40$  years, or  $\geq 0.15$  mV in women; OR
- 2) New horizontal or down-sloping ST depression  $\geq 0.05$  mV in two contiguous leads and/or T inversion  $\geq 0.1$  mV in two contiguous leads with prominent R wave or R/S ratio  $> 1$

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.; Stedman's Medical Dictionary for the Health Professions and Nursing, 7th ed., (modified); ECG Criteria from European Society of Cardiology, American College of Cardiology Foundation, American Heart Association, Inc., and the World Heart Federation. Expert Consensus Document 2012 doi:10.1038/nrcardui,2012.122.

**OR FIRE** – Combustion in which fuel or other material is ignited and combined with oxygen, giving off light, heat, and/or flame on or near patients who are under anesthesia care

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists: Practice advisory for the prevention and management of operating room fires. *Anesthesiology* 2013;118(n2)

**PATENT FORAMEN OVALE** - An unrepaired separation between the septum primum and septum secundum in the anterosuperior portion of the atrial septum of the heart.

*Synonyms:* PFO, persistent foramen ovale

*Notes:* When there is no true deficiency of the interatrial septum, a PFO is diagnosed by echocardiography (presence of microbubbles in the left atrium within 3 to 6 cardiac cycles after intravenous administration of agitated saline and a maneuver to raise right atrial pressure [positive bubble test]) or by cardiac catheterization. Transcranial doppler of the cerebral arteries is an alternative method to detect microbubbles passing through a PFO after intravenous administration of agitated saline and a maneuver to raise right atrial pressure.

*Source:* Guidelines for the echocardiographic assessment of atrial septal defect and patent foramen ovale: from the American Society of Echocardiography and Society for Cardiac Angiography and Interventions. *J Am Soc Echocardiogr* 2015;28:910-58. ICD-10: Q21.1

**PERIOPERATIVE VISUAL LOSS** – Total or partial loss of sight in one or both eyes after non-ocular surgery not caused by direct trauma or injury to the eye or the central nervous system

*Synonyms:* Visual loss, loss of vision, vision loss

*Note:* This excludes visual changes caused by a perioperative stroke or other CNS event. Perioperative visual loss may be produced by central retinal artery occlusion or anterior or posterior ischemic optic neuropathy.

*AQI XML Schema Element:* <OutcomeID>

**PERIPHERAL NEUROLOGIC DEFICIT AFTER REGIONAL ANESTHESIA** – In a patient who has received regional anesthesia or analgesia, there is impaired sensory and/or motor and/or autonomic function that persists for more than 72 hours after the last injection of local anesthetic or adjuvant drug without other identifiable etiologies.

*Synonym:* PNI

*Note:* Nerve damage may be confirmed by electrophysiologic testing such as nerve conduction studies or electromyography. Regional anesthesia includes epidural, spinal, and peripheral nerve blocks.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**PNEUMONIA** – Inflammation of the lung parenchyma characterized by consolidation of the affected part, the alveolar air spaces being filled with exudate, inflammatory cells, and fibrin produced by infection (bacterial, virus, fungus) or chemical irritation (aspiration)

Per the CDC, Pneumonia is defined by:

Radiology finding on chest radiograph or CT of new persistent infiltrate, consolidation, or cavitation AND at least one of the following:

- Fever (>38 degree C or > 100.4 degree F)
- Leukopenia (<4,000 WBC/mm<sup>3</sup>) or Luekocytosis (>12,000 WBC/mm<sup>3</sup>)
- For adults > 70 years old, altered mental status with no other recognized cause

AND at least TWO of the following:

- New onset of purulent sputum, or change in character of sputum, or increased respiratory secretions, or increased suctioning requirements
- New onset or worsening cough, or dyspnea, or tachypnea
- Rales or bronchial breath sounds
- Worsening gas exchange (e.g. O<sub>2</sub> desaturations or PaO<sub>2</sub>/FiO<sub>2</sub><240, increased oxygen requirements, or increased ventilator demand)

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified); Centers for Disease Control

**PNEUMOTHORAX** – The unintended presence of air or gas in the pleural cavity, diagnosed by clinical findings or imaging (x-ray, CT, or ultrasound) that results from a regional anesthetic such as supraclavicular brachial plexus block, barotrauma, or instrumentation of the airway.

*Synonyms:* Pneumothorax following attempted vascular access or regional anesthesia, tension pneumothorax

*Note:* This does not include pneumothorax related to CVL placement. Pneumothorax related to CVL placement should be reported as a Central Line Placement Injury.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**POSITIONING INJURY** – Damage or harm to the patient resulting from the placement of his/her body and extremities while under anesthesia

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)



**POSTDISCHARGE NAUSEA AND VOMITING** – Nausea (involuntary symptoms resulting from an inclination to vomit, often occurring before vomiting; sickness at the stomach accompanying a loathing for food) and/or vomiting (the ejection of the contents of the stomach through the esophagus and mouth) that occurs after the DISCHARGE FROM PACU/ICU Time.

*Synonym:* PDNV

*Note:* Post-discharge nausea and vomiting is a subclass of post-operative nausea and vomiting.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)

**POSTDURAL PUNCTURE HEADACHE** – The new onset of pain in various parts of the head, not confined to the area of distribution of any nerve, usually occurring within 72 hours of an intended or unintended dural puncture. Signs and symptoms include the headache worsening in the sitting or upright position, usually relieved when the patient is supine, may be accompanied by visual or auditory changes, and may occur more frequently in younger patients when the dura has been punctured. A clinical scenario in which a postdural puncture headache may present may be following placement of an epidural or spinal anesthetic or sometimes following a nerve block in close proximity to the neuraxis (e.g., paravertabral or intescalene block).

*Synonym:* Spinal headache

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**POSTOPERATIVE COGNITIVE DYSFUNCTION** – A loss or decrement from baseline mental function in domains such as learning and memory, judgement, reasoning, verbal abilities, executive functions or perception occurring after anesthesia and surgery.

*Synonyms:* Cognitive dysfunction, POCD

*Note:* Postoperative cognitive dysfunction can only be confirmed by a decrement in mental abilities from the preoperative level when measured by standardized neuropsychological testing (baseline versus postoperative scores).

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary (modified); Deiner S, Silverstein JH. Postoperative delirium and cognitive dysfunction. Br J Anaesth 2009;103 (suppl 1), i41. (modified)

**POSTOPERATIVE NAUSEA AND VOMITING** – Nausea (involuntary symptoms resulting from an inclination to vomit, often occurring before vomiting; sickness at the stomach accompanying a loathing for food), retching and/or vomiting (the ejection of the contents of the stomach through the esophagus and mouth) occurring between the conclusion of a surgical, diagnostic, or therapeutic procedure for which anesthesia care was provided and the DISCHARGE FROM PACU/ICU Time and requiring the administration of a rescue antiemetic medication for treatment.

*Synonyms:* Postoperative nausea, postoperative vomiting, emesis, PONV

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)

**PROLONGED NEUROMUSCULAR BLOCK** – An unanticipated increased duration of patient weakness after administration of a neuromuscular blocking agent (a medication that produces paralysis or weakness by preventing the activation of skeletal muscles by the nervous system at the myoneural junction)

*Synonyms:* Prolonged block requiring sedation, Prolonged muscle blockade

*AQI XML Schema Element:* <OutcomeID>

*Source:* Mosby's Medical Dictionary, 9th edition.2009, Elsevier (modified)

**PULMONARY EDEMA** – Accumulation of extravascular fluid in lung tissues and alveoli diagnosed by chest x-ray, ultrasound, clinical examination, or blood gas analysis

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary for the Health Professions and Nursing, 7th ed.

**PULMONARY EMBOLUS** – A blood clot that travels from or through the heart to the lungs

*Synonyms:* PE, venous thromboembolism, pulmonary embolism

*AQI XML Schema Element:* <OutcomeID>

**RESPIRATORY ARREST** – The unplanned cessation of spontaneous breathing for longer than 60 seconds in adults. For infants, it is cessation of breathing for 20 seconds or longer, or a shorter respiratory pause associated with bradycardia, cyanosis, pallor, and/or marked hypotonia.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Mosby's Medical Dictionary, 9th edition. 2009, Elsevier (modified); American Academy of Pediatrics

**RESPIRATORY FAILURE** – Inadequate pulmonary function, either acute or chronic, that results in hypoxemia or hypercarbia

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary for the Health Professions and Nursing, 7th ed. (modified)

**SEIZURE** – Abnormal electric activity of the neurons in the brain that may have several clinical manifestations such as a sudden, violent involuntary series of contractions of a group of muscles (grand mal seizure); this outcome does not apply to seizures that are medically induced as part of a therapy such as electroconvulsive therapy (ECT)

*Synonym:* Convulsion

*AQI XML Schema Element:* <OutcomeID>

*Source:* Mosby's Medical Dictionary, 9th edition. 2009, Elsevier (modified)

**SEPSIS** – Life-threatening organ dysfunction caused by a dysregulated host response to infection

*AQI XML Schema Element:* <OutcomeID>

*Source:* Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3) JAMA 2016

**SHIVERING** – Trembling occurring as a thermoregulatory response to cold or onset of fever

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**SKIN OR MUCOUS MEMBRANE INJURY** – Damage or harm to any portion of the membranous protective covering of the body

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**SPINAL CORD INJURY** – Damage to the spinal cord that causes temporary or permanent changes in the patient's motor, sensory, or autonomic function

*Note:* Spinal cord injury may result from infection, ischemia, compression (as from a hematoma), or physical injury; a spinal cord injury may be complete resulting in a total loss of motor and sensory function in the body below the area of injury or incomplete resulting in only partial sensory or motor deficits.

*AQI XML Schema Element:* <OutcomeID>

**SPINAL HEMATOMA FOLLOWING SPINAL OR EPIDURAL ANESTHESIA** – Symptomatic bleeding within the spinal neuraxis occurring after a completed or attempted epidural or spinal anesthetic. The hematoma may be confirmed by imaging (MRI).

*Synonyms:* Spinal hematoma, epidural hematoma, spinal subdural hematoma

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**SURGICAL SITE INFECTIONS (SSI)** – Includes: (A) Superficial Incisional SSI; (B) Deep Incisional SSI; and (C) Organ/Space SSI

- A. Superficial Incisional SSI – An infection (defined as the invasion of the body with organisms that have the potential to cause disease) that occurs within 30 days after the principal operative procedure and the infection involves only skin or subcutaneous tissue of the incision and at least one of the following: A. Purulent drainage, with or without laboratory confirmation, from the superficial incision; B. Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision; C. Superficial incision is deliberately opened by the surgeon and at least one of the following signs or symptoms of infection: pain or tenderness, localized swelling, redness, or heat

- B. Deep Incisional SSI – An infection (defined as the invasion of the body with organisms that have the potential to cause disease) that occurs at the surgical site within 30 days after the principal operative procedure and involves deep soft tissues and at least one of the following: A. Purulent drainage from the deep incision but not from the organ/space component of the surgical site; B. A deep incision spontaneously dehisces or is deliberately opened by a surgeon when the patient has at least one of the following signs or symptoms: fever (> 38° C), localized pain, or tenderness, unless the site is culture-negative; C. An abscess or other evidence of infection involving the deep incision is found on direct examination, during reoperation, or by histopathologic or radiologic examination.
- C. Organ/Space SSI – An infection (defined as the invasion of the body with organisms that have the potential to cause disease) that occurs within 30 days after the principal operative procedure and involves any of the anatomy (e.g., organs or spaces), other than the incision, which was opened or manipulated during the operation and at least one of the following: A. Purulent drainage from a drain that is placed through a stab wound into the organ/space.; B. Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space; C. An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation, or by histopathologic or radiologic examination.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Centers for Disease Control, Guideline for Prevention of Surgical Site Infection, 1999; American College of Surgeons NSQIP Operations Manual 1July2015; The Joint Commission National Patient Safety Goal NPSG.07.05.01; Stedman's Medical Dictionary 28th ed.

**TRANSFUSION REACTION** – An immune mediated adverse event consisting of immediate or delayed red blood cell hemolysis, allergic reaction, febrile reaction, or acute lung injury produced by the transfusion of a blood product

*Synonyms:* Hemolytic transfusion reaction, transfusion-related acute lung injury (TRALI)

*Note:* Signs and symptoms indicating a transfusion reaction may include new onset of: fever, chills, rash, flank pain or back pain, bloody urine, fainting or dizziness, kidney failure, delayed anemia, lung dysfunction, or shock.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**ULCER** – A lesion through the skin or mucous membrane resulting from loss of tissue, usually with inflammation

*Synonyms:* Ulcus, Erosion

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**UNANTICIPATED TRANSFUSION** – The unplanned need to administer blood or blood components as demonstrated by absence of a blood sample for type and screen prior to the Anesthesia Start Time<sup>1</sup>.

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

*Note:* Transfusion is the introduction into the bloodstream of whole blood or blood components, such as plasma, platelets, or packed red blood cells from a donor other than the patient.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Mosby's Medical Dictionary, 9th edition.2009 (modified)

**UNPLANNED CONVERSION TO GENERAL ANESTHESIA** – The need to induce general anesthesia as a result of the failure or inadequacy of the originally initiated anesthetic technique such as regional, neuraxial or local anesthesia. General anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. General anesthesia often impairs the patient's cardiovascular function and/or the ability to independently maintain spontaneous ventilation. Under general anesthesia, patient may require assistance in maintaining a patent airway and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug induced depression of neuromuscular function.

*Clinical scenario:* Failed epidural, spinal, regional, or topical or infiltration anesthesia that results in inadequate anesthesia in the anatomic area of the planned surgery or procedure necessitating the need for general anesthesia to begin or complete the planned surgery or procedure.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists, Committee on Quality Management and Departmental Administration. Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia. Oct 15, 2014

**UNPLANNED DURAL PUNCTURE** – Unintentionally piercing or perforating the dura mater (the tough, fibrous membrane forming the outer covering of the central nervous system).

*Synonyms:* Unintended dural puncture; wet tap

*Note:* Unintended dural puncture may occur during attempted placement of a needle or a catheter in the epidural space.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed.

**UNPLANNED ELECTRIC SHOCK** - an unplanned passage of an electric current (flow of electrons) through the body that produces pain, tissue injury, or other physiological reaction.

*Note:* This does not include planned passage of current for medical diagnostic or therapeutic procedures ( ex., cardioversion).

**UNPLANNED ENDOBRONCHIAL INTUBATION** – Insertion of an endotracheal tube to a depth that permits ventilation of only one lung or a portion of one lung and when the position of the endotracheal tube is not recognized and corrected.

*Synonyms:* Bronchial intubation, Mainstem intubation

*Note:* Unrecognized endobronchial intubation for an extended time will result in an adverse event such as atelectasis of a portion of the lung and hypoxia.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary (modified)

**UNPLANNED ESOPHAGEAL INTUBATION** – Unintentionally inserting an endotracheal tube into the esophagus, the anatomic connection between the pharynx and the stomach.

*Note:* This applies to an event when the endotracheal tube is originally intended to be placed in the trachea. Esophageal intubation may be confirmed by absence of carbon dioxide in gas coming from the patient through the tube. Unrecognized esophageal intubation for an extended time will result in an adverse event such as hypoxia.

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary (modified)

**UNPLANNED HOSPITAL ADMISSION** – Transfer of a patient, scheduled for an outpatient procedure, to an in-patient status (patient is assigned a bed in a health care facility to undergo diagnosis and/or receive treatment and care) from an anesthetizing site, PACU, or other clinical location that was not anticipated or arranged at the time that anesthetic care was initiated

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary. 28th ed. (modified)

**UNPLANNED HYPOTHERMIA** – An unintended core body temperature lower than 95.9 degrees Fahrenheit (35.5 degrees Celsius) occurring within the 30 minutes immediately before or the 15 minutes immediately after ANESTHESIA END TIME.

*AQI XML Schema Element:* <OutcomeID>

**UNPLANNED ICU ADMISSION** – Transfer of a patient to an ICU from an anesthetizing site, PACU, or other clinical location that was not anticipated or arranged at the time that anesthetic care was initiated.

*Note:* Reasons for unplanned admission to the ICU may include unanticipated clinical conditions requiring continuous monitoring such as the need for continued ventilation or respiratory support, the need for ongoing vasopressor support, unstable airway, the potential for apnea, and prolonged action of anesthetic agents or neuromuscular blockade. Unplanned postoperative ventilation should also be selected if it is the indication for unplanned ICU admission.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**UNPLANNED POSTOPERATIVE VENTILATION** – The need to provide mechanical pulmonary support that was not anticipated or expected at the time that anesthetic care was initiated

*Note:* Unplanned ICU admission should also be selected for patients who have unplanned postoperative ventilation.

*AQI XML Schema Element:* <OutcomeID>

**UNPLANNED REINTUBATION** – The need to insert an endotracheal tube resulting from the inability to sustain adequate spontaneous breathing occurring after the removal of an artificial airway

*Synonyms:* Extubation failure, reintubation, unintended reintubation

*Clinical Scenarios:* (1) protection of the airway or to facilitate respiratory support to treat hypoxia, hypercarbia, respiratory insufficiency, altered mental status, or inadequate ventilation mechanics; and (2) at the conclusion of general anesthetic during which an endotracheal tube or LMA was placed and the airway device was removed.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified)

**UNPLANNED REOPERATION** – The need for or to undertake a surgical procedure that was not planned at the time of the principal operative procedure

*Synonym:* Unplanned return to the OR

*EXCLUSIONS:* This does not include a return to the OR if an unintended principal procedure is aborted due to patient physiology and is rescheduled for the completion of the initial procedure at a later date; unanticipated findings are discovered, such as a progressed disease state, during the principal procedure requiring additional or subsequent operations; a return to the OR for a follow-up procedure based on the pathology results from the principal operative procedure or concurrent procedure such as breast biopsies which return for re-excisions or insertion of port-a-caths for chemotherapy.

*AQI XML Schema Element:* <OutcomeID>

*Source:* American College of Surgeons NSQIP Operations Manual 1July2015

**UNPLANNED TRACHEAL EXTUBATION** – Unanticipated or unintentional removal of the endotracheal tube during or after ventilatory support or a surgical procedure

*Synonym:* Inadvertent tracheal extubation

*AQI XML Schema Element:* <OutcomeID>

*Source:* Stedman's Medical Dictionary (modified)

**VASCULAR INJURY** – Damage or harm to an artery or vein resulting from placement of a vascular access device such as an intravenous catheter, central venous catheter, or intra-arterial catheter

*Note:* Scenarios include carotid or subclavian arterial puncture or dilatation during placement of a central venous catheter.

*AQI XML Schema Element:* <OutcomeID>

**VENOUS AIR EMBOLISM** – Atmospheric gas, introduced into the vascular system, that travels to an organ such as the heart, brain, lungs, or kidney

*Synonyms:* VAE, air embolus

*Note:* Venous air embolism may occur in many circumstances such as neurosurgical or orthopedic surgery, central venous catheter insertion or removal, or with intravenous administration of medication or fluids.

*AQI XML Schema Element:* <OutcomeID>

**VENTILATION FOR MORE THAN 24 HOURS POST PROCEDURE** – A patient who has a total of ventilator-assisted respirations greater than 24 hours after the conclusion of a procedure requiring anesthesia care

*Synonym:* Prolonged postoperative ventilation

*Note:* this does not include patients on CPAP or BiPAP. It does include patients who remain intubated immediately after their anesthetic procedure and those who require reintubation within 6 hours after conclusion of an anesthetic.

*AQI XML Schema Element:* <OutcomeID>

**WRONG PATIENT** – Administering anesthesia to or performing a procedure (diagnostic or therapeutic) on a patient for whom it was not intended

*Synonym:* Incorrect patient

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified); The Joint Commission (modified)

**WRONG PROCEDURE** – Performing an incorrect or unintended intervention, treatment, or operation

*Synonyms:* Incorrect procedure, wrong surgery

*AQI XML Schema Element:* <OutcomeID>

*Source:* The Joint Commission (modified)

**WRONG SITE REGIONAL ANESTHESIA** – Injection of a local anesthetic or other medication around a nerve intended to provide analgesia or anesthesia for a surgical, diagnostic, or therapeutic procedure but inadvertently performed on the wrong side, wrong body part, or wrong patient.

*Synonyms:* Wrong side block, wrong site nerve block

*Note:* This includes regional anesthesia or analgesia or peripheral nerve block.

*AQI XML Schema Element:* <OutcomeID>



*Source:* American Society of Regional Anesthesia and Pain Medicine (modified)

**WRONG SITE SURGERY** – An operation on the incorrect or unintended anatomic part, organ, body side, or location or surgery performed on a body part not consistent with the documented informed consent for that patient, excluding emergent situations whose urgency precludes obtaining informed consent from either the patient or an authorized representative

*Synonyms:* Operation on wrong site, operation on incorrect site

*AQI XML Schema Element:* <OutcomeID>

*Source:* American Society of Anesthesiologists Committee on Performance and Outcomes Measurement (CPOM) August 2009 Annual Report. Aug 23, 2009 (modified); The Joint Commission (modified)

**OUTCOME SEVERITY** – The degree of harm that may or may not have been caused by the adverse event

**NO HARM** – Event reached the patient, but no harm was evident within 24 hours to three days after the event

*AQI XML Schema Element:* <OutcomeSeverity>

*Source:* AHRQ Common Formats Harm Scale v1.2

**MILD HARM** – Bodily or psychological injury resulting in minimal symptoms or loss of function, or injury limited to additional treatment, monitoring and/or increased length of stay

*AQI XML Schema Element:* <OutcomeSeverity>

*Source:* AHRQ Common Formats Harm Scale v1.2

**MODERATE HARM** – Bodily or psychological injury adversely affecting function ability or quality of life, but not at a level of severe harm

*AQI XML Schema Element:* <OutcomeSeverity>

*Source:* AHRQ Common Formats Harm Scale v1.2

**SEVERE HARM** – Bodily or psychological injury (including pain or disfigurement) that interferes significantly with functional ability or quality of life

*AQI XML Schema Element:* <OutcomeSeverity>

*Source:* AHRQ Common Formats Harm Scale v1.2

**DEATH** – Dead at time of assessment

*Note:* This data element is the severity of the outcome of an adverse event and should not be confused with the outcome data element – death – in the NACOR Outcome Data Elements. The conceptual definitions are different because the use and purpose of the data elements are different.

*Source:* AHRQ Common Formats Harm Scale v1.2 (modified)

**OUTCOME TIME FRAME** – The period of time at which the outcome occurred.

**PRE-OPERATIVE** – The outcome occurred at a time between the decision to have surgery and the beginning of the surgical procedure

*AQI XML Schema Element: <OutcomeTimeFrame>*

**INTRA-OPERATIVE** – The outcome occurred at a time between the beginning and the end of the surgical, therapeutic, or diagnostic procedure

*AQI XML Schema Element: <OutcomeTimeFrame>*

**POSTOPERATIVE/PACU (POST-ANESTHESIA CARE UNIT)** – The outcome occurred at a time between the end of the surgical, therapeutic, or diagnostic procedure and the time the patient was transported out of the PACU

*Note:* The patient may have already been discharged from the PACU but has not been transported to another location.

*AQI XML Schema Element: <OutcomeTimeFrame>*

**24 HOURS** – The outcome occurred after the patient left the PACU but within 24 hours from Anesthesia Start Time<sup>1</sup>

*AQI XML Schema Element: <OutcomeTimeFrame>*

**48 HOURS** – The outcome occurred after the patient left the PACU but within 48 hours from Anesthesia Start Time<sup>1</sup>

*Note:* For reporting the time of occurrence of an outcome, the longest appropriate single choice should be used. For example, if an adverse outcome occurred between 24+ and 48 hours after Anesthesia Start Time<sup>1</sup>, 48 hours should be reported.

*AQI XML Schema Element: <OutcomeTimeFrame>*

**7 DAYS** – The outcome occurred within 7 days after Anesthesia Start Time<sup>1</sup>

*Note:* For reporting the time of occurrence of an outcome, the longest appropriate single choice should be used. For example, if an adverse outcome occurred between 48+ hours and 7 days after Anesthesia Start Time<sup>1</sup>, 7 days should be reported.

*AQI XML Schema Element: <OutcomeTimeFrame>*

**30 DAYS** – The outcome occurred within 30 days after Anesthesia Start Time<sup>1</sup>

*Note:* For reporting the time of occurrence of an outcome, the longest appropriate single choice should be used. For example, if an adverse outcome occurred between 7+ days and 30 days after Anesthesia Start Time<sup>1</sup>, 30 days should be reported.

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

*AQI XML Schema Element:* <OutcomeTimeFrame>

**60 DAYS** – The outcome occurred within 60 days after Anesthesia Start Time<sup>1</sup>

*Note:* For reporting the time of occurrence of an outcome, the longest appropriate single choice should be used. For example, if an adverse outcome occurred between 30+ days and 60 days after Anesthesia Start Time<sup>1</sup>, 60 days should be reported.

*AQI XML Schema Element:* <OutcomeTimeFrame>

**90 DAYS** – The outcome occurred within 90 days after Anesthesia Start Time<sup>1</sup>

*Note:* For reporting the time of occurrence of an outcome, the longest appropriate single choice should be used. For example, if an adverse outcome occurred between 60 days after Anesthesia Start Time<sup>1</sup>, 90 days should be reported.

*AQI XML Schema Element:* <OutcomeTimeFrame>

**1 YEAR** – The outcome occurred within one year (365 days) after Anesthesia Start Time<sup>1</sup>

*Note:* For reporting the time of occurrence of an outcome, the longest appropriate single choice should be used. For example, if an adverse outcome occurred between 90+ days and 1 year after Anesthesia Start Time<sup>1</sup>, 1 year, days should be reported.

*AQI XML Schema Element:* <OutcomeTimeFrame>

## COMORBIDITY DATA ELEMENTS

### CARDIOVASCULAR

**ARTERIAL VASCULAR DISEASE** – A circulatory condition involving chronically narrowed blocked or weakened arteries. Revascularization techniques such as surgery, angioplasty, stenting and atherectomy may have been performed as treatment including lower extremity amputations. Excludes venous disease and coronary artery disease.

Arterial disease may occur in several locations:

- Aortic Disease – Thoracic or abdominal aorta
- Carotid Artery Disease – One or both common carotid arteries
- Visceral Vascular Disease – Celiac, splenic, mesenteric, or renal arteries
- Peripheral Artery Disease – Iliac, femoral, popliteal, or posterior tibial arteries  
Synonyms: PAD, PVD, Peripheral Vascular Disease

*Synonyms:* Peripheral vascular disease, peripheral arterial disease

*Note:* Includes patients who have had revascularization or amputation procedures.

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP-2011 VERSION; Elixhauser Comorbid Condition

## CARDIAC ARRHYTHMIA AND CONDUCTION ABNORMALITIES

*Synonyms:* Cardiac dysrhythmia, irregular heartbeat

*Note:* This does not include benign cardiac rhythms such as occasional premature atrial contraction, occasional premature ventricular contractions (PVC), sinus arrhythmia, asymptomatic bradycardia.

*AQI XML Schema Element:* <ICDValue>

*Source:* Elixhauser Comorbid Condition

*INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:*

**2ND DEGREE HEART BLOCK** – A disorder of the cardiac conduction system in which one or more (but not all) of the atrial impulses do not conduct through the atrioventricular node to the ventricles and can be classified as Type 1 (Mobitz I /Wenckebach) or Type 2 (Mobitz II).

*AQI XML Schema Element:* <ICDValue>

**3RD DEGREE HEART BLOCK** – A disorder of the cardiac conduction system in which there is no conduction through the atrioventricular node.

*Synonyms:* Complete heart block, atrioventricular block

*AQI XML Schema Element:* <ICDValue>

**ATRIAL FIBRILLATION** – An abnormal supraventricular cardiac rhythm in which the atria (upper chambers of the heart) beat irregularly (quiver) instead of contracting normally.

- Paroxysmal - Episodes of atrial fibrillation that terminate spontaneously or with intervention within 7 days; may recur with variable frequency
- Persistent - Episodes of continuous atrial fibrillation that last more than 7 days and do not self-terminate

*Synonyms:* AF, AFib

*AQI XML Schema Element:* <ICDValue>

**ATRIAL FLUTTER** – An abnormal heart rhythm originating in the atria of the heart and one of the supraventricular tachycardias diagnosed by the presence of flutter waves at a rate of greater than 200 atrial beats/minute on ECG.

*Synonyms:* Flutter, A flutter

*AQI XML Schema Element:* <ICDValue>

**AICD PRESENT** – The patient has an automatic implantable cardioverter defibrillator (AICD) in place to treat a life-threatening cardiac rhythm.

*AQI XML Schema Element:* <ICDValue>

**CONGENITAL LONG QT SYNDROME** – An inherited heart condition in which there is delayed repolarization of the ventricles

*AQI XML Schema Element:* <ICDValue>

**LEFT BUNDLE BRANCH BLOCK** – A cardiac conduction abnormality, diagnosed by ECG, in which the activation of the left ventricle is delayed

*Synonym:* LBBB

*AQI XML Schema Element:* <ICDValue>

**OTHER PAROXYSMAL TACHYCARDIA (MAT, PAT, ECTOPIC ATRIAL TACHYCARDIA, AVNRT)** – One of a group of rapid heart rhythms that begins and ends suddenly including multifocal atrial tachycardia (MAT), paroxysmal atrial tachycardia (PAT), ectopic atrial tachycardia, and atrioventricular nodal reentry tachycardia (AVNRT)

*AQI XML Schema Element:* <ICDValue>

**PACEMAKER DEPENDENT** – A cardiovascular implantable electronic device (pacemaker or AICD) is required for the patient to consistently have a perfusing cardiac rhythm.

*AQI XML Schema Element:* <ICDValue>

**SICK SINUS SYNDROME** – Abnormal heart rhythms produced by a malfunction of the sinus node, the heart's primary pacemaker

*Synonyms:* SSS, sinus dysfunction, sinoatrial disease

*AQI XML Schema Element:* <ICDValue>

**VENTRICULAR FIBRILLATION** – A life-threatening arrhythmia consisting of disorganized electrical activity in the cardiac ventricles and diagnosed with a characteristic pattern on electrocardiogram (ECG).

*Synonyms:* V-fib, VF

*AQI XML Schema Element:* <ICDValue>

**VENTRICULAR TACHYCARDIA** – A life-threatening, rapid, regular heart rhythm arising from abnormal electrical activity in the cardiac ventricles diagnosed with a characteristic pattern on electrocardiogram (ECG).

*Synonyms:* V-tach, VT

*AQI XML Schema Element:* <ICDValue>

**CONGENITAL HEART DISEASE – STATUS** – Congenital heart disease is defined as an abnormal anatomy and function of the heart, aorta, and/or other large veins or arteries that are present at birth. Congenital heart disease status is one of the following:

**REPAIRED** – A patient, with a congenital heart defect, who has undergone one or more surgical or percutaneous catheter procedures that has resulted in normal or near normal separation of the systemic and pulmonary circulations, restoration of adequate flow of oxygenated blood to the systemic capillary

beds, and reduction of volume and pressure loads towards normal levels.

*AQI XML Schema Element: <ICDValue>*

**UNREPAIRED** – A patient, with a congenital heart defect, who has not undergone a surgical or percutaneous catheter procedure to correct the structural or functional cardiac abnormality.

*AQI XML Schema Element: <ICDValue>*

**PALLIATED** – A patient, with a congenital heart defect, who has undergone one or more surgical or percutaneous catheter procedures that do not completely correct the cardiac or vascular defects but improves the volume of oxygenated blood to the systemic capillary beds and/or improves the volume or pressure loads of the heart.

*AQI XML Schema Element: <ICDValue>*

## **CONGENITAL HEART DISEASE – STRUCTURAL DEFECTS**

**ANOMALOUS PULMONARY VENOUS RETURN** – A defect in which one or more of the pulmonary veins drain/connect abnormally into the right atrium

*AQI XML Schema Element: <ICDValue>*

**ATRIAL SEPTAL DEFECT** – A defect in the interatrial septum permitting blood to flow directly between the left and right atria.

*Synonym: ASD*

*AQI XML Schema Element: <ICDValue>*

**ATRIOVENTRICULAR CANAL DEFECT** – A defect consisting of an atrial septal defect, ventricular septal defect, and improperly formed mitral and/or tricuspid valves

*Synonyms: Endocardial cushion defect, atrioventricular septal defect*

*AQI XML Schema Element: <ICDValue>*

**COARCTATION OF THE AORTA** – A condition with aortic narrowing, usually in the area where the ductus arteriosus inserts

*Synonyms: Coarc, CoA*

*AQI XML Schema Element: <ICDValue>*

**COR TRIATRIATUM** – A defect in which there are three atria as a result of an abnormal membrane or tissue band that divides either the right or left atrium

*AQI XML Schema Element: <ICDValue>*

**DEXTROCARDIA** – A condition in which the heart points to the right side of the chest

*AQI XML Schema Element: <ICDValue>*

**DOUBLE OUTLET RIGHT VENTRICLE** – A defect in which both the aorta and pulmonary artery connect to the right ventricle.

*Synonym:* DORV

*AQI XML Schema Element:* <ICDValue>

**EBSTEIN'S ANOMALY** – A congenital defect in which the septal and posterior leaflets of the tricuspid valve are displaced towards the apex of the right ventricle.

*AQI XML Schema Element:* <ICDValue>

**HYPOPLASTIC LEFT HEART SYNDROME** – A defect in which the left heart is severely underdeveloped resulting in hypoplasia (small and incompletely formed) of the left ventricle, aortic and/or mitral valves, ascending aorta, and arch

*Synonym:* HLHS

*AQI XML Schema Element:* <ICDValue>

**INTERRUPTED AORTIC ARCH** – A congenital condition in which the aorta is not completely developed and there is a gap between the ascending and descending thoracic aorta

*Synonym:* IAA

*AQI XML Schema Element:* <ICDValue>

**PATENT DUCTUS ARTERIOSUS** – A condition in which the ductus arteriosus (connecting the aorta and pulmonary artery) fails to close after birth.

*Synonym:* PDA

*AQI XML Schema Element:* <ICDValue>

**SHONE'S COMPLEX** – A congenital condition with four defects including supralvalvular mitral membrane, parachute mitral valve, subaortic stenosis, and coarctation of the aorta

*Synonyms:* Shone's syndrome, Shone's anomaly

*AQI XML Schema Element:* <ICDValue>

**TETRALOGY OF FALLOT** – A condition with four defects including a ventricular septal defect, pulmonary stenosis, right ventricular hypertrophy, and overriding aorta

*Synonyms:* TOF, Tet

*AQI XML Schema Element:* <ICDValue>

**TRANSPOSITION OF THE GREAT VESSELS** – A group of congenital cardiac defects involving the abnormal spatial arrangement and/or connections of the great vessels (superior and/or inferior venae cavae, pulmonary artery, pulmonary veins, and aorta) and the heart

*Synonyms:* Transposition, TGV

*AQI XML Schema Element:* <ICDValue>

**TRUNCUS ARTERIOSUS** – A defect in which a single blood vessel comes from the right and left ventricles as a result of failure of the pulmonary artery to completely separate from the aorta during embryologic development

*AQI XML Schema Element: <ICDValue>*

**VENTRICULAR SEPTAL DEFECT** – A defect in the ventricular septum (the wall dividing the left and right ventricles) that permits blood to flow abnormally between the ventricles.

*Synonym: VSD*

*AQI XML Schema Element: <ICDValue>*

**CONGESTIVE HEART FAILURE (CHF) – TIME OF MOST RECENT EPISODE** – The time from the new diagnosis of congestive heart failure or an exacerbation of known congestive heart failure requiring additional treatment.

*Note:* Congestive heart failure is defined by the patient's report or medical documentation of one or more of the following signs and symptoms: dyspnea on light exertion, recurrent dyspnea when supine, fluid retention, or physical examination finding rales, jugular venous distension, or pulmonary edema. Pulmonary edema finding may be on physical examination or chest x-ray. A finding of low ejection fraction or elevated serum BNP are not sufficient. Includes all patients with a ventricular assist device.

*Source:* NSQIP – Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016-December 31, 2016); Definition paraphrased from STS; Crossref: NYSDOH CHF\_CUR/CHF\_PAST; STS CHF/PriorHF; NSQIP2011/2015 HXCHF

**LESS THAN 30 DAYS PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element: <ICDValue>*

**30 DAYS OR MORE PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element: <ICDValue>*

**CONGESTIVE HEART FAILURE (CHF) – TYPE** – The cardiac functional abnormality producing congestive heart failure.

*Note:* Congestive heart failure is defined by the patient's report or medical documentation of one or more of the following signs and symptoms: dyspnea on light exertion, recurrent dyspnea when supine, fluid retention, or physical examination finding rales, jugular venous distension, or pulmonary edema. Pulmonary edema finding may be on physical examination or chest x-ray. A finding of low ejection fraction or elevated serum BNP are not sufficient. This includes all patients with a ventricular assist device.

**HEART FAILURE WITH PRESERVED EJECTION FRACTION** – Signs or symptoms of heart failure with normal left ventricular systolic function (Ejection Fraction > 50%) and evidence of left ventricular diastolic dysfunction such as left ventricular hypertrophy, left atrial enlargement, or atrial fibrillation, or by echocardiographic criteria.

*Synonym: HFpEF*

*AQI XML Schema Element: <ICDValue>*

**HEART FAILURE WITH REDUCED EJECTION FRACTION – MILD** – Left ventricular Ejection Fraction 41% to 45% as measured by echocardiography, cardiac catheterization, or radiologic imaging.



*Synonym:* HFrEF

*AQI XML Schema Element:* <ICDValue>

**HEART FAILURE WITH REDUCED EJECTION FRACTION – MODERATE** – Left ventricular Ejection Fraction 36% to 40% as measured by echocardiography, cardiac catheterization, or radiologic imaging.

*Synonym:* HFrEF

*AQI XML Schema Element:* <ICDValue>

**HEART FAILURE WITH REDUCED EJECTION FRACTION – SEVERE** – Left ventricular Ejection Fraction less than 35% as measured by echocardiography, cardiac catheterization, or radiologic imaging.

*Synonym:* HFrEF

*AQI XML Schema Element:* <ICDValue>

**ELEVATED PULMONARY VASCULAR RESISTANCE AND PULMONARY HYPERTENSION** – The patient has an elevated pulmonary vascular resistance and will have either elevated pulmonary artery pressure (> 50 mmHg as measured by right heart catheterization or echocardiography) or normal pulmonary artery pressure depending on their cardiac output. In children > 3 months of age, pulmonary hypertension is a mean pulmonary artery pressure  $\geq$  25 mmHg at sea level.

*Synonyms:* PHTN, PH

*AQI XML Schema Element:* <ICDValue>

*Source:* AHA/ATS Guideline. Pediatric pulmonary hypertension. Circulation 2015;132:2037-2099.

**HISTORY OF ANGINA WITHIN 1 MONTH OF THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>** – History (via patient report or documentation) of chest pain or other symptoms of myocardial ischemia\* within one month of the date of the Anesthesia Start Time<sup>1</sup>.

\* Myocardial Ischemia is defined in the AQI NACOR DATA ELEMENT CONCEPTUAL DEFINITIONS-For Use During 2017; Outcome Data Set (v2, dated 31 Oct 2016) as: A temporary condition in which there is inadequate circulation of blood and transport of oxygen and glucose via the coronary arteries to the heart muscle but does not result in death of myocardium. It may be diagnosed by clinical symptoms of angina, ECG (ST segment or T wave) changes, new myocardial wall motion abnormality, or small increases in troponin.

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP-2011 VERSION; Crossref: NYSDOH CCS\_CLAS; STS AnginalClass; NSQIP2011 HXANGINA

**HISTORY OF MYOCARDIAL INFARCTION** – History (via patient report or documentation) of a myocardial infarction (MI)\*.

\* Myocardial Infarction is defined in the AQI NACOR DATA ELEMENT CONCEPTUAL DEFINITIONS-For Use During 2017; Outcome Data Set (v2, dated 31 Oct 2016) as: Blockage of blood flow in a coronary artery causing damage or death of a portion of the heart muscle. Diagnostic criteria (ONE of the following): (1) Documented ECG changes indicative of acute MI with one or more of (a) ST elevation > 1 mm in two or more contiguous leads not resolved within 20 minutes, (b) New left bundle branch block, (c) New q-wave in two or more contiguous leads; (2) New elevation in troponin greater than 3 times the upper level of the reference range in the setting of suspected myocardial infarction; (3) Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality

*Synonyms:* Cardiac infarction, heart attack, MI, Acute MI

*Note:* While registries limit to physician documentation, patient history is explicitly included as a valid source.

*Source:* NSQIP-2011 VERSION; Crossref: NYSDOH PREMILT6/PREMI623/PREMIIDAY; STS  
PrevMI/MIWhen; NSQIP2011 HXMI

**MI WITHIN 30 DAYS OF THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>** – Infarction of a segment of heart muscle occurring within 30 days of the date of the Anesthesia Start Time<sup>1</sup>.

*AQI XML Schema Element:* <ICDValue>

**MI WITHIN 31 TO 90 DAYS OF THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>** – Infarction of a segment of heart muscle occurring within 31 to 90 days of the date of the Anesthesia Start Time<sup>1</sup>.

*AQI XML Schema Element:* <ICDValue>

**MI WITHIN 91 TO 180 DAYS OF THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>** – Infarction of a segment of heart muscle occurring within 91 to 180 days of the planned date of the Anesthesia Start Time<sup>1</sup>.

*AQI XML Schema Element:* <ICDValue>

**MI MORE THAN 180 DAYS FROM THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>** – Infarction of a segment of heart muscle occurring more than 180 days from the planned date of the Anesthesia Start Time<sup>1</sup>.

*AQI XML Schema Element:* <ICDValue>

**HISTORY OF PREVIOUS PERCUTANEOUS CORONARY INTERVENTION** – History (via patient report or documentation) of a prior percutaneous coronary intervention. Percutaneous coronary intervention (PCI) is the placement of an angioplasty guide wire, balloon, or other device (e.g. stent, atherectomy, brachytherapy, or thrombectomy catheter) into a native coronary artery or coronary artery bypass graft for the purpose of mechanical coronary revascularization. PCI does not include valvuloplasty but does include placement of a bare metal (BMS) or drug eluting stent (DES).

*Synonyms:* Coronary angioplasty; PCI

*Note:* In patients who have had stents placed at multiple times, the date of the most recent stent procedure should be used for the timing of this data element.

*Source:* NSQIP-2011 VERSION; PCI Definition is copied from STS; valvoplasty exclusion from NSQIP; Crossref: NYSDOH POCPCI; STS PrCVInt; NSQIP2011 PRVPCI

**BARE METAL STENT PLACED ≤ 1 MONTH PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element:* <ICDValue>

**BARE METAL STENT PLACED > 1 MONTH PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element:* <ICDValue>

**DRUG ELUTING STENT PLACED ≤ 6 MONTHS PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element:* <ICDValue>

**DRUG ELUTING STENT PLACED > 6 MONTHS PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element:* <ICDValue>

**HYPERTENSION REQUIRING MEDICATION** – A chronic condition whereby the long-term force exerted by the blood against the artery walls is high and one or more medications are indicated for treatment.

*Synonym:* High blood pressure

*Notes:* The threshold for hypertension in an adult is usually considered as any blood pressure measurement where the systolic reading is >140 mmHg and/or the diastolic reading is >90 mmHg. The specific values for the diagnosis of hypertension vary with the patient's age.

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP – Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016- December 31, 2016); Elixhauser Comorbid Condition

**LEFT VENTRICULAR OUTFLOW TRACT OBSTRUCTION** – A fixed or dynamic condition that impedes the flow of blood from the left ventricle at the level of the outflow tract.

*Note:* This includes hypertrophic cardiomyopathy, asymmetric septal hypertrophy (ASH), and hypertrophic obstructive cardiomyopathy (HOCM), systolic anterior motion of the anterior leaflet of the mitral valve (SAM), and idiopathic hypertrophic subaortic stenosis (IHSS).

*AQI XML Schema Element:* <ICDValue>

**RIGHT VENTRICULAR FAILURE** – A clinical syndrome due to an alteration of structure and/or function of the right heart circulatory system that leads to suboptimal delivery of blood flow (high or low) to the pulmonary circulation and/or elevated venous pressures—at rest or with exercise, documented by right heart catheterization or echocardiography. Right heart failure may be secondary to left heart failure or increased pulmonary artery pressure. This includes patients with right ventricular mechanical circulatory support devices.

*Synonym:* Cor pulmonale

*AQI XML Schema Element:* <ICDValue>

*Source:* Mehra MR, Park MH, Landzberg MJ, Lala A, Waxman AB, and the International Right Heart Failure Foundation Scientific Working Group. Right heart failure: toward a common language. *Pulm Circ* 2013;4:963-7

**HISTORY OF VENOUS THROMBOEMBOLIC DISEASE/PULMONARY EMBOLI** – Patients with clots in the venous system including those that had a clot that traveled to a pulmonary artery. This includes patients who have an IVC filter.

*AQI XML Schema Element:* <ICDValue>

**PERICARDIAL TAMPONADE** – The abnormal accumulation of fluid or blood in the pericardial space (around the heart) resulting in reduced ventricular filling and hemodynamic compromise.

*AQI XML Schema Element:* <ICDValue>

**VALVULAR HEART DISEASE** – A disease process involving damage to or a defect in one of the four heart valves (mitral, aortic, tricuspid, or pulmonary) that prevents the valve from opening or closing normally.

*Synonym:* Heart Valve Disease

*Note:* There are 2 types of Valvular Heart Disease: 1) Valvular Stenosis and 2) Valvular Insufficiency (also known as regurgitation, incompetence or "leaky valve").

*Source:* Elixhauser Comorbid Condition

**AORTIC STENOSIS CLASSIFICATION BY ECHOCARDIOGRAPHY OR CATHETERIZATION – MODERATE**

*Note:* Aortic jet velocity: 3.0 – 4.0  
Mean gradient: 20 – 40 mmHG  
AVA: 1.0 – 1.5 cm<sup>2</sup>  
Indexed AVA: 0.60 – 0.85 cm<sup>2</sup>/m<sup>2</sup>  
Velocity ratio: 0.25 – 0.50

*AQI XML Schema Element:* <ICDValue>

*Source:* The National Center for Biotechnology Information (NCBI)

**AORTIC STENOSIS CLASSIFICATION BY ECHOCARDIOGRAPHY OR CATHETERIZATION – SEVERE**

*Note:* Aortic jet velocity: >4.0  
Mean gradient: >40 mmHG  
AVA: <1.0 cm<sup>2</sup>  
Indexed AVA: <0.60 cm<sup>2</sup>/m<sup>2</sup>  
Velocity ratio: <0.25

*AQI XML Schema Element:* <ICDValue>

*Source:* The National Center for Biotechnology Information (NCBI)

**AORTIC INSUFFICIENCY – MODERATE** – Functional incompetence of the aortic valve with resulting regurgitation of blood from the aorta during left ventricular diastole (Echocardiographic criteria: Central jet width > 25 to 64% of Left Ventricular Outflow Tract (LVOT), Regurgitant Fraction 30 to 49%, and Vena contracta 0.3 to 0.6 cm).

*Synonym:* Moderate aortic regurgitation

*AQI XML Schema Element:* <ICDValue>

**AORTIC INSUFFICIENCY – SEVERE** – Functional incompetence of the aortic valve with resulting regurgitation of blood from the aorta during left ventricular diastole (Echocardiographic criteria: Central jet width > 65% of Left Ventricular Outflow Tract (LVOT), holodiastolic flow reversal in the descending aorta, and Vena contracta > 0.6 cm)

*Synonym:* Severe aortic regurgitation

*AQI XML Schema Element:* <ICDValue>

**MITRAL STENOSIS – MODERATE** – Pathologic narrowing of the orifice of the mitral valve with the valve area between 1.0 and 1.5 cm<sup>2</sup> and mean gradient of 5 to 10 mmHg.

*AQI XML Schema Element:* <ICDValue>

*Source:* American Society of Echocardiography classification of mitral stenosis severity

**MITRAL STENOSIS – SEVERE** – Pathologic narrowing of the orifice of the mitral valve with the valve area less than 1.0 cm<sup>2</sup> and mean gradient > 10 mmHg

*AQI XML Schema Element:* <ICDValue>

*Source:* American Society of Echocardiography classification of mitral stenosis severity

**MITRAL INSUFFICIENCY CLASSIFICATION BY ECHOCARDIOGRAPHY – MODERATE** – Pathologic failure of the mitral valve to close properly during systole.

*Synonyms:* Mitral valvular regurgitation, mitral valvular incompetence, mitral valvular insufficiency, MR

*Note:* Jet plane surface/LA: 20 – 40%  
Jet plane surface: 4 – 10cm<sup>2</sup>  
EROA: 0.20 – 0.39 cm<sup>2</sup>  
Vena contracta: 0.3 – 0.69 cm  
Regurgitant fraction: 30 – 49%

*AQI XML Schema Element:* <ICDValue>

**MITRAL INSUFFICIENCY CLASSIFICATION BY ECHOCARDIOGRAPHY – SEVERE** – Pathologic failure of the mitral valve to close properly during systole.

*Synonyms:* Mitral valvular regurgitation, mitral valvular incompetence, mitral valvular insufficiency

*Note:* Jet plane surface/LA: >40%  
Jet plane surface: 10 cm<sup>2</sup>  
EROA: ≥0.40 cm<sup>2</sup>  
Vena contracta: ≥0.70 cm  
Regurgitant fraction: >50%  
Pulmonary vein flow: Systolic flow reversal

*AQI XML Schema Element:* <ICDValue>

**PULMONARY STENOSIS CLASSIFICATION BY ECHOCARDIOGRAPHY – MODERATE** – Pathologic narrowing of the lumen of the pulmonic valve.

*Note:* Peak velocity: 3 – 4 m/s  
Peak gradient: 36 – 64 mmHg

*AQI XML Schema Element:* <ICDValue>

**PULMONARY STENOSIS CLASSIFICATION BY ECHOCARDIOGRAPHY – SEVERE** – Pathologic narrowing of the lumen of the pulmonic valve.

*Note:* Peak Velocity: >4 m/s  
Peak gradient: >64 mmHg

*AQI XML Schema Element:* <ICDValue>

**TRICUSPID INSUFFICIENCY CLASSIFICATION BY ECHOCARDIOGRAPHY – MODERATE** – Pathologic failure of the tricuspid valve to close properly during systole.

*Note:* Jet area—central jets: 5 – 10 cm<sup>2</sup>  
Vena cava width: Not defined but <0.7 cm  
PISA radius: 0.6 – 0.9 cm  
Jet density and contour—CW: Dense, variable contour  
Hepatic vein flow: Systolic blunting

*AQI XML Schema Element:* <ICDValue>

**TRICUSPID INSUFFICIENCY CLASSIFICATION BY ECHOCARDIOGRAPHY – SEVERE** – Pathologic failure of the tricuspid valve to close properly during systole.

*Note:* Jet area—central jets: >10 cm<sup>2</sup>  
Vena cava width: >0.7 cm  
PISA radius: >0.9 cm  
Jet density and contour—CW: Dense, triangular with early peaking  
Hepatic vein flow: Systolic reversal

*AQI XML Schema Element:* <ICDValue>

**TRICUSPID STENOSIS BY ECHOCARDIOGRAPHY – SEVERE** – Pathologic narrowing of the lumen of the tricuspid valve.

*Note:* Mean pressure gradient: ≥5 mmHg  
Inflow time velocity integral: >60 cm  
T1/2: ≥190 ms  
Valve area: ≤1 cm<sup>2</sup>

*AQI XML Schema Element:* <ICDValue>

## ENDOCRINE

**DIABETES MELLITUS** – A chronic disease in which the ability to produce or respond to insulin is impaired, resulting in abnormal metabolism of carbohydrates and elevated levels of glucose in the blood. Type 1 is defined as a chronic condition, characterized by high blood glucose levels, in which the pancreas produces little or no insulin and exogenous insulin is required for treatment. Type 2 is defined as a condition characterized by high blood glucose levels caused by inadequate production of insulin by the pancreas or by insulin resistance, the body's inability to normally utilize insulin.

*Source:* Stedman's Medical Dictionary, 28th ed, 2006; ICD 10 - Endocrine, nutritional and metabolic diseases; Diabetes Mellitus <http://apps.who.int/classifications/icd10/browse/2016/en#/E10-E14>

**TYPE 1 – UNCOMPLICATED** – A patient with Type 1 diabetes mellitus without disease associated systemic conditions including but not limited to retinopathy, nephropathy, neuropathy, or vasculopathy.

*Synonyms:* Insulin dependent diabetes mellitus, IDDM, juvenile-onset diabetes

*AQI XML Schema Element:* <ICDValue>

**TYPE 1 – COMPLICATED** – A patient with Type 1 diabetes mellitus with disease associated systemic conditions including but not limited to retinopathy, nephropathy, neuropathy, or vasculopathy.

*Synonyms:* Insulin dependent diabetes mellitus, IDDM, juvenile-onset diabetes

*AQI XML Schema Element:* <ICDValue>

**TYPE 2 – UNCOMPLICATED** – A patient with Type 2 diabetes mellitus without disease associated systemic conditions including but not limited to retinopathy, nephropathy, neuropathy, or vasculopathy.

*Synonyms:* Non-insulin dependent diabetes mellitus, NIDDM, adult-onset diabetes

*AQI XML Schema Element:* <ICDValue>

**TYPE 2 – COMPLICATED** – A patient with Type 2 diabetes mellitus with disease associated systemic conditions including but not limited to retinopathy, nephropathy, neuropathy, or vasculopathy.

*Synonyms:* Non-insulin dependent diabetes mellitus, NIDDM, adult-onset diabetes

*AQI XML Schema Element:* <ICDValue>

**HYPOTHYROIDISM** – A patient with diminished production of thyroid hormone.

*Synonym:* Underactive thyroid

*Note:* This includes patients receiving thyroid hormone replacement.

*AQI XML Schema Element:* <ICDValue>

*Source:* Stedman's Medical Dictionary, 28th ed, 2006; ICD 10 - Diseases of the thyroid gland

## GENERAL

**DYSPNEA** – Shortness of breath with subjective difficulty or distress in breathing.

*Synonyms:* Short of breath (SOB), dyspnea on exertion (DOE), shortness of breath on exertion (SOBOE), Exertional dyspnea

*Note:* The diagnosis of dyspnea is based on the patient's report, medical record, or direct observation.

*Source:* Stedman's Medical Dictionary, 28th ed, 2006

**DYSPNEA WITH EXERTION** – The individual becomes short of breath when performing minimal physical activities.

*AQI XML Schema Element: <ICDValue>*

**DYSPNEA AT REST** – The individual is short of breath at rest.

*AQI XML Schema Element: <ICDValue>*

**FRAILTY SYNDROME** – A geriatric syndrome with age-associated declines in physiologic reserve and function as measured by a validated clinical assessment tool.

*Note:* Measurement of frailty is evolving, and several validated clinical assessment tools exist. There is no consensus regarding the best way to measure frailty.

*AQI XML Schema Element: <ICDValue>*

**FUNCTIONAL CAPACITY** – The extent to which a person can increase and maintain exercise intensity or perform aerobic work as documented by patient report or the medical record.

**POOR** – The individual is unable to perform minimal physical activities without symptoms (1 MET).

*AQI XML Schema Element: <ICDValue>*

**MILD/MODERATE LIMITATION** – At the highest level of activity, the individual is able to walk slowly on level ground (2-3 METs).

*AQI XML Schema Element: <ICDValue>*

**GOOD** – At the highest level of activity, the individual is able to climb at least one flight of stairs without stopping (4 METs).

*AQI XML Schema Element: <ICDValue>*

**EXCELLENT** – At the highest level of activity, the individual is able to do strenuous activity like swimming or running (> 7 METs).

*AQI XML Schema Element: <ICDValue>*

**FUNCTIONAL HEALTH STATUS** – Functional status is an assessment of an individual's maximum ability to perform normal daily activities required to meet basic needs, fulfill usual roles, and maintain health and well-being in the 30 days prior to the Anesthesia Start Time<sup>1</sup>. Activities of daily living (ADL) include bathing, feeding, dressing, toileting, and mobility.

*Synonym:* Health Related Quality of Life (HRQL)

*Source:* American Thoracic Society <http://qol.thoracic.org/sections/key-concepts/functional-status.html>; ACS NSQIP 2015

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)



**INDEPENDENT** – Able to perform ADLs without help from another person.

*AQI XML Schema Element: <ICDValue>*

**PARTIALLY DEPENDENT** – Requires some assistance from another person to perform ADLs.

*AQI XML Schema Element: <ICDValue>*

**TOTALLY DEPENDENT** – Requires assistance from another person to perform all ADLs.

*AQI XML Schema Element: <ICDValue>*

**HISTORY OF DIFFICULT AIRWAY** – Patient report, external documentation such as a letter from an anesthesia provider, or medical record documenting difficult mask ventilation or difficult intubation on one or more previous anesthetics.

*Note:* The condition associated with difficult airway may have been resolved and no longer present, for example angioedema of the airway in the past.

**DIFFICULT MASK VENTILATION** – The inability of an unassisted trained anesthesia provider to maintain the oxygen saturation as measured by pulse oximetry to > 92% or to prevent or reverse signs of inadequate ventilation during positive-pressure mask ventilation.

*AQI XML Schema Element: <ICDValue>*

**DIFFICULT INTUBATION** – Problematic or challenging insertion of an endotracheal tube into the patient's trachea, requiring at least 3 attempts by one or more skilled individuals.

*AQI XML Schema Element: <ICDValue>*

**HISTORY OF DIFFICULT IV ACCESS** – Patient report, external documentation such as a letter from an anesthesia provider, or the medical record documenting that more than three attempts by an experienced anesthesia provider or additional equipment such as an ultrasound device were required for placement of a peripheral intravenous catheter.

*AQI XML Schema Element: <ICDValue>*

**HISTORY OF PONV** – Patient report, external documentation such as a letter from an anesthesia provider, or medical record documenting PONV\* after a previous anesthetic.

\* PONV (Post-Operative Nausea and Vomiting) is defined in the AQI NACOR DATA ELEMENT CONCEPTUAL DEFINITIONS as: Nausea (involuntary symptoms resulting from an inclination to vomit, often occurring before vomiting; sickness at the stomach accompanying a loathing for food), retching and/or vomiting (the ejection of the contents of the stomach through the esophagus and mouth) occurring between the conclusion of a surgical, diagnostic, or therapeutic procedure for which anesthesia care was provided and the DISCHARGE FROM PACU/ICU Time **and** requiring the administration of a rescue antiemetic medication for treatment.

*AQI XML Schema Element: <ICDValue>*

**HISTORY OF MOTION SICKNESS** – Motion sickness is a disorder, including nausea, vomiting and/or dizziness, caused by motion, such as sea sickness, train sickness, car sickness, air sickness, or space motion sickness.

*AQI XML Schema Element: <ICDValue>*

**MALIGNANT HYPERTHERMIA SUSCEPTIBILITY** – Patient report, external documentation such as a letter from an anesthesia provider, or medical record documenting that the patient had malignant hyperthermia\* associated with a prior anesthetic, has had a positive muscle biopsy or genetic test for malignant hyperthermia\*, has a predisposing medical condition, or has an immediate family member that experienced malignant hyperthermia\*.

\* Malignant Hyperthermia is defined in the AQI NACOR DATA ELEMENT CONCEPTUAL DEFINITIONS as: A potentially fatal, inherited disorder usually associated with the administration of volatile anesthetics and/or succinylcholine. The disorder is due to an acceleration of metabolism in skeletal muscles and may produce muscle rigidity, masseter spasm, tachycardia, elevated core temperature, increased carbon dioxide and acid production, and muscle breakdown resulting in myoglobinuria.

*AQI XML Schema Element: <ICDValue>*

**PREOPERATIVE AGE** - A patient (child, developmentally delayed adult, or cognitively-impaired individual) that does not possess appropriate coping skills or the capacity to experience the perioperative environment in a cooperative manner.

Note: This condition may be an indication for general anesthesia.

Source: Alpha Omegan 2006, 99 (2) 78-82

## HEPATOBIILIARY/GI

**ASCITES** – Abnormal accumulation of serous fluid in the peritoneal cavity associated with liver disease or malignancy within 30 days of Anesthesia Start Time<sup>1</sup>.

*Synonym:* hydroperitoneum

*Note:* Ascitic fluid may have been removed via a transcutaneous procedure so no fluid is present at the Anesthesia Start Time<sup>1</sup>. ICD 10 - Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified; <http://apps.who.int/classifications/icd10/browse/2016/en#/R18>

*AQI XML Schema Element: <ICDValue>*

*Source:* Mosby's Medical Dictionary, 9th ed, 2009

**ESOPHAGEAL VARICES** – Abnormally dilated veins at the lower end of the esophagus usually occurring as the result of portal hypertension.

*AQI XML Schema Element: <ICDValue>*

*Source:* Mosby's Medical Dictionary, 9th ed, 2009

**GASTROESOPHAGEAL REFLUX DISEASE REQUIRING TREATMENT** – A condition in which stomach contents or acid come up into the esophagus and one or more medications are used for treatment.

*Note:* Includes use of prescription and/or non-prescription medications.

*AQI XML Schema Element:* <ICDValue>

**LIVER DISEASE** – Any disease or disorder that causes the liver to function improperly or cease functioning. The extent of functional liver impairment can be assessed or quantified using one or more of the 4 methods listed below.

*Note:* The concept "Liver Disease" includes hepatitis and cirrhosis caused by viruses, alcohol, toxins, and autoimmune conditions as well as nonalcoholic steatohepatitis (NASH). The prolonged INR must not be associated with the concomitant administration of an anticoagulant drug like warfarin. ICD 10 - Diseases of the digestive system; Diseases of the Liver - <http://apps.who.int/classifications/icd10/browse/2016/en#/K70-K77>

*Source:* McGraw-Hill Concise Dictionary of Modern Medicine, 2002; Mosby's Medical Dictionary, 9th ed, 2009

**MELD NA SCORE (MODEL FOR END-STAGE LIVER DISEASE)** – A scale used to stratify the severity of end-stage liver disease in patients 12 years of age or older for transplant planning and that is calculated based on the following variables: dialysis at least twice in the week prior to the date of the Anesthesia Start Time<sup>1</sup>; serum creatinine, bilirubin, and sodium concentration; and INR (international normalized ratio evaluating the extrinsic pathway for blood coagulation) value.

*AQI XML Schema Element:* <ICDValue>

**PELD SCORE (PEDIATRIC END-STAGE LIVER DISEASE)** – A scale used to stratify the severity of end-stage liver disease in patients less than 12 years of age for transplant planning and that is calculated based on the following variables: age less than 1 year, total bilirubin, serum albumin, INR, and history of growth failure

*AQI XML Schema Element:* <ICDValue>

**SERUM ALBUMIN CONCENTRATION < 3.0 GM/L** – Serum albumin concentration measured within 30 days of the date of the Anesthesia Start Time<sup>1</sup>.

*AQI XML Schema Element:* <ICDValue>

**INR > 2** – INR (international normalized ratio) measured within 30 days of the date of the Anesthesia Start Time<sup>1</sup>.

*AQI XML Schema Element:* <ICDValue>

## **LABORATORY VALUES PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

**LABORATORY VALUES MEASURED WITHIN 30 DAYS PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>** – The most current laboratory value measured within 30 days prior to the date of the Anesthesia Start Time<sup>1</sup> that are considered important for NACOR purposes. These include but are not limited to:

- Albumin (Alb) (g/dl)
- Alkaline Phosphatase (Alk Phos) (IntUnit/L)
- Aspartate Transaminase (AST) (IntUnits/L)
- Blood glucose (glucose) (mg/dl)
- Blood Urea Nitrogen (BUN) (mg/dl)
- Hematocrit (Hct) (%)

- Hemoglobin A1c (HbA1c) (%)
- International Normalized Ratio (INR) (unitless ratio)
- Lactate (Lact) (mmol/L)
- Partial Thromboplastin Time (PTT) (seconds)
- Platelets (Plt) (cells/mcL)
- Serum Chloride (Cl) (mmol/L)
- Serum Creatinine (Cr) (mg/dl)
- Serum Potassium (K) (mmol/L)
- Serum Sodium (Na) (mmol/L)
- Total Bilirubin (TB) (mg/dl)
- White Blood Cell Count (WBC) (cells/mcL)

*Note:* Some lab values may change as the patient's clinical condition and treatment evolve. A relative time stamp should be provided with each of the reported lab values.

*AQI XML Schema Element:* <PreLabData>

```
<LabName>Albumin</LabName>
<LabCategoryName>Hematology</LabCategoryName>
<LabUnit>g/dl</LabUnit>
<LabValue>{Numeric Value}</LabValue>
<LabValueText>{Numeric Value}</LabValueText>
<LabRangeHigh>{Numeric Value}</LabRangeHigh>
<LabRangeLow>{Numeric Value}</LabRangeLow>
<LabDateTime>2017-01-01T07:00:00</LabDateTime>
<LabComments>{Insert comments if any}</LabComments>
</PreLabData>
```

## NEUROLOGIC AND PSYCHIATRIC

**ALTERED MENTAL STATUS – ACUTE** – New onset of mental status changes in the context of the current illness.

*Note:* Patients with chronic mental status changes secondary to chronic mental illness or chronic dementing illnesses are excluded from this category.

*Source:* Term listed in NSQIP-2011 VERSION

**DELIRIUM** – An altered state of consciousness marked by confusion, disorientation or temporary memory dysfunction, difficulty in sustained attention to stimuli, disordered thinking and perception. There must be evidence from the history, physical examination, or laboratory findings that the disturbance is caused by the direct physiological consequences of a general medical condition or that the condition developed during substance intoxication or during or shortly after a withdrawal syndrome. There are 3 types of delirium including hyperactive, hypoactive, or mixed.

*AQI XML Schema Element:* <ICDValue>

**ENCEPHALOPATHY** – A syndrome of brain dysfunction with an organic or inorganic cause including but not limited to hepatic, uremic, anoxic, infectious, and toxic.

*AQI XML Schema Element:* <ICDValue>

**PSYCHOSIS** – A disturbance lasting between one day and one month that involves the sudden onset of at least one of the following psychotic symptoms: delusions, hallucinations, disorganized speech (e.g., frequent derailment or incoherence), or grossly abnormal psychomotor behavior, including catatonia.

*AQI XML Schema Element: <ICDValue>*

**DEMENTIA** – A chronic condition that produces impaired memory, thinking, executive functions, and social abilities.

*Note:* There are many causes of dementia including Alzheimer’s disease, multi-infarct (vascular) dementia, frontotemporal dementia, and Lewy Body dementia

*AQI XML Schema Element: <ICDValue>*

**DEPRESSION** – A psychiatric disorder characterized by the presence of a sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual’s capacity to function.

*Note:* Change must be present for more than two weeks, representing a mood change from a person's baseline, which impairs social, occupational or educational function

*AQI XML Schema Element: <ICDValue>*

*Source:* Elixhauser Comorbidity Condition - DSM-IV

**HISTORY OF STROKE** – A previous infarction of central nervous system tissue (embolic, thrombotic, or hemorrhagic) with motor, sensory, or cognitive dysfunction (e.g., hemiplegia, hemiparesis, aphasia, sensory deficit, impaired memory).

*Synonyms:* Cerebrovascular accident, CVA, brain attack

*Source:* Term listed in NSQIP-2011 VERSION; and American Heart Association/American Stroke Association Scientific Statement. Definition and Evaluation of Transient Ischemic Attack. Stroke 2009;40;2276-2293.

**STROKE OCCURRING LESS THAN 3 MONTHS PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element: <ICDValue>*

**STROKE OCCURRING MORE THAN 3 BUT LESS THAN 6 MONTHS PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element: <ICDValue>*

**STROKE OCCURRING MORE THAN 6 BUT LESS THAN 12 MONTHS PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element: <ICDValue>*

<sup>1</sup>Anesthesia Start Time is defined in the [Minimum Data Set section](#)

**STROKE OCCURRING MORE THAN 12 MONTHS PRIOR TO THE DATE OF THE ANESTHESIA START TIME<sup>1</sup>**

*AQI XML Schema Element: <ICDValue>*

**HISTORY OF TRANSIENT ISCHEMIC ATTACK** – One or more transient episodes of neurological dysfunction caused by focal brain, spinal cord or retinal ischemia, without acute infarction.

*Synonym: TIA*

*Note:* This also includes Reversible Ischemic Neurologic Deficits (RIND), where neurological symptoms resolve within several weeks.

*AQI XML Schema Element: <ICDValue>*

Source: American Heart Association/American Stroke Association Scientific Statement. Definition and Evaluation of Transient Ischemic Attack. Stroke 2009;40;2276-2293.

**HYDROCEPHALUS** – Excessive accumulation of cerebrospinal fluid (CSF) in the brain.

**SHUNT PRESENT** – Presence of a cerebrospinal fluid drainage device.

*AQI XML Schema Element: <ICDValue>*

**NO SHUNT**

*AQI XML Schema Element: <ICDValue>*

**OBTUNDATION > 24 HOURS** – The patient has diminished responsiveness for at least 24 hours prior to the date of the Anesthesia Start Time<sup>1</sup>.

*Note:* Includes obtunded states, stuporous states, persistent vegetative state, and coma. This does not include medically drug-induced coma or sedation-induced changes in mental status.

*AQI XML Schema Element: <ICDValue>*

*Source:* Term listed in NSQIP-2011 VERSION; Modified from NSQIP

**OTHER NEUROLOGIC DISORDERS**

**AMYOTROPHIC LATERAL SCLEROSIS** – A progressive neurodegenerative disease that results in the death of neurons in the brain and spinal cord that control voluntary muscles.

*Synonyms:* Lou Gehrig's Disease, ALS

*AQI XML Schema Element: <ICDValue>*

**AUTISM SPECTRUM DISORDER** – A chronic condition that appears in childhood in which the individual demonstrates persistent deficits in social communication and social interaction and has repetitive patterns of behavior, interests, or activities.

*Note:* Includes Aspergers

*AQI XML Schema Element:* <ICDValue>

*Source:* Modified from the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 5th edition

**CEREBRAL PALSY** – A neurological disorder caused by a non-progressive brain injury or malformation that occurs while the child's brain is under development. Cerebral Palsy affects body movement, muscle control, muscle coordination, muscle tone, reflex, posture and balance. It can also impact fine motor skills, gross motor skills and oral motor functioning.

*AQI XML Schema Element:* <ICDValue>

*Source:* cerebralpalsy.org

**DEVELOPMENTAL DISABILITY** – A group of conditions that result in impairment in physical abilities, learning, language, cognitive function, or behavior.

*Note:* Causes of Developmental Disability include, but are not limited to, Down syndrome, fetal alcohol syndrome, and cerebral palsy

*AQI XML Schema Element:* <ICDValue>

**MULTIPLE SCLEROSIS** – A chronic neurodegenerative disease that results in the demyelination of nerves in the brain and spinal cord

*Synonym:* MS

*AQI XML Schema Element:* <ICDValue>

**MYASTHENIA GRAVIS** – A chronic, autoimmune neuromuscular disease that is caused by antibodies that block or destroy nicotinic acetylcholine receptors at the junction between the nerve and the muscle and produces varying degrees of skeletal muscle weakness.

*AQI XML Schema Element:* <ICDValue>

**PARALYSIS** – Sustained acute or chronic neuromuscular injury or disease producing a loss of voluntary movement in the muscles in a portion of the body.

*Source:* Term listed in NSQIP-2011 VERSION; Elixhauser Comorbid Condition; Modified from NSQIP 2011

**HEMIPLEGIA** – Severe or complete loss of motor function of one side of the body

*AQI XML Schema Element:* <ICDValue>

**PARAPLEGIA** – Severe or complete loss of motor function of both lower extremities resulting from a spinal cord lesion below the 1<sup>st</sup> thoracic level

*AQI XML Schema Element:* <ICDValue>

**QUADRAPLEGIA** – Severe or complete loss of motor function of all four extremities resulting from a spinal cord lesion located in the cervical region

*Synonym:* Tetraplegia

*AQI XML Schema Element:* <ICDValue>

**PARKINSON'S DISEASE** – A chronic, progressive degenerative disorder of the central nervous system that affects motor function and produces symptoms including tremors, rigidity, and slowness of movement. It is caused by insufficient production of dopamine in the neurons of the substantia nigra.

*Synonyms:* Parkinson's, parkinsonism

*AQI XML Schema Element:* <ICDValue>

**SEIZURE DISORDER** – A disease in which the individual has recurring seizures (an abnormal sudden surge of electrical activity in the brain) of any type and requires medication or other treatment.

*Synonyms:* Epilepsy, convulsions

*AQI XML Schema Element:* <ICDValue>

**PSYCHOSIS** – A chronic disturbance that involves at least one of the following psychotic symptoms: delusions, hallucinations, disorganized speech (e.g., frequent derailment or incoherence), or grossly abnormal psychomotor behavior.

*Note:* This includes schizophrenia and delusional disorders. This includes patients who are on medication for treatment.

*AQI XML Schema Element:* <ICDValue>

## **NUTRITIONAL/IMMUNOLOGIC/OTHER**

**> 10% LOSS OF BODY WEIGHT IN 6 MONTHS PRIOR TO SURGERY** – Unintentional loss of more than 10% of body weight in the six months prior to the date of the Anesthesia Start Time<sup>1</sup>.

*Note:* The data for the patient's serial weights may come from the medical record or from the patient's self-report.

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP - Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016-December 31, 2016); Modified from NSQIP 2016; Elixhauser Comorbid Condition

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)



**ANEMIA** – Abnormally low hemoglobin level.

*Source:* Elixhauser Comorbid Condition; Elixhauser codes include 280.1 to 281.9 which includes other nutritional deficiencies: B12/Folate, whether dietary or otherwise. Also 285.2 (chronic illness) and 285.9 (chronic or acute hemorrhage). ICD9: 280.8, 280.9; ICD10: D508. Incremental value of anemia in cardiac surgical risk prediction with the European System for Cardiac Operative Risk Evaluation (EuroSCORE) II model. [Ann Thorac Surg.](#) 2014 Sep;98(3):869-75. doi: 10.1016/j.athoracsur.2014.04.124. Epub 2014 Jul 29; and World Health Organization. Hemoglobin concentration for the diagnosis of anemia and assessment of severity. WHO/NMH/NHD/MNM/11.1; 2011. (<http://www.who.int/vmnis/indicators/haemoglobin.pdf>, accessed June 8, 2017)

**ADULTS AND CHILDREN > 5 YEARS** – Hemoglobin < 13.0 gm/dL in men and Hemoglobin < 12.0 gm/dL in women.

*AQI XML Schema Element:* <ICDValue>

**CHILDREN FROM 6 MONTHS TO 5 YEARS** – Hemoglobin < 10.0 gm/dL.

*AQI XML Schema Element:* <ICDValue>

**PREOP TRANSFUSION OF RED BLOOD CELLS** – Preoperative loss of blood or anemia requiring the administration of at least 1 unit of whole or packed RBCs during the 72 hours prior to the Anesthesia Start Time<sup>1</sup>.

*Note:* Includes blood transfused in the Emergency Room, does not include administration of FFP, platelets, or colloid volume expanders.

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP - Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016-December 31, 2016)

**HIV INFECTION** – A patient who has been infected with the human immunodeficiency virus (HIV).

*Note:* Includes patients who are or have been infected with HIV and those with AIDS

*AQI XML Schema Element:* <ICDValue>

*Source:* Elixhauser Comorbid Condition

## **COAGULATION DISORDER**

**HYPERCOAGULABLE STATE**- an inherited or acquired condition associated with a predisposition for venous or arterial thrombosis that exists at the Anesthesia Start Time<sup>1</sup>.

*Examples:* Factor V Leiden, Protein S and C deficiency, antiphospholipid antibody syndrome, thrombophilia, thromboembolic disease associated with malignancy

*AQI XML Schema Element:* <ICDValue>

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

**COAGULOPATHY** - A condition that prevents the blood from clotting normally and that exists at the Anesthesia Start Time<sup>1</sup>.

*Synonym:* Bleeding disorder

*Examples:* hemophilia, thrombocytopenia, genetic or acquired Von Willibrand disease, thrombocytopenia, disseminated intravascular coagulation, and anticoagulation or antiplatelet therapy (excluding aspirin and non-steroidal anti-inflammatory agents) that had not been discontinued for a sufficient length of time prior to the date of the Anesthesia Start Time<sup>1</sup>.

*Note:* The hematologic disorder or presence of medication producing the abnormal coagulation must be active at the Anesthesia Start Time<sup>1</sup>. The cause can be attributable to abnormal or insufficient plasma or tissue coagulation factors or to platelet abnormality. One or more laboratory tests for assessing coagulation will likely be present.

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP - Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016-December 31, 2016); Modified from NSQIP 2016; Elixhauser Comorbid Condition

**FLUID/ELECTROLYTE DISORDER** – A metabolic disorder including an abnormal serum concentration of sodium, potassium, calcium, phosphate, or magnesium, or an abnormal blood pH that is present at the Anesthesia Start Time<sup>1</sup>.

Disorder(s) include:

- Acidemia (blood pH < 7.35)
- Alkalemia (blood pH > 7.45)
- Hypercalcemia (serum calcium > 10.7 mg/dL)
- Hyperglycemia (blood glucose > 250 mg/dL)
- Hyperkalemia (serum potassium > 5.0 mEq/L)
- Hypermagnesemia (serum magnesium > 2.6 mg/dL)
- Hyponatremia (serum sodium > 145 mEq/L)
- Hypoglycemia (blood glucose < 70 mg/dL)
- Hypokalemia (serum potassium < 3.5 mEq/L)
- Hyponatremia (serum sodium < 135 mEq/L)
- Hypophosphatemia (<1.0 mg/dL)

*AQI XML Schema Element:* <ICDValue>

*Source:* Elixhauser Comorbid Condition

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

**IMMUNOCOMPROMISED** – Vulnerable to an opportunistic infection as a result of an impaired or weakened immune system (cellular and/or humoral).

**ACQUIRED** – Includes: leukemia, lymphoma, myelodysplasia (MDS), pancytopenia, infectious (AIDS), or any other disease state whose pathophysiology includes a decline in the function of the immune system or one of its major elements.

*AQI XML Schema Element: <ICDValue>*

**CONGENITAL/PRIMARY** – Includes: IgA deficiency, severe combined immune deficiency (SCID), common variable immune deficiency

*AQI XML Schema Element: <ICDValue>*

**MEDICATIONS** – Patient is receiving or has received any of the following within 30 days of the Anesthesia Start Time<sup>1</sup>: includes glucocorticoids, calcineurin inhibitors, anti-metabolites (e.g., mycophenolate mofetil) or other medications used as immunosuppressives for transplant or the treatment of auto-immune disorders and diseases (e.g., basiliximab or infliximab).

*Exclusions:* Topical application of corticosteroid or immunosuppressant medication is excluded as well as a short course (less than 10 days) of steroids for an acute condition.

*AQI XML Schema Element: <ICDValue>*

**OBESITY** – An excess of subcutaneous fat in proportion to lean body mass with a body mass index (BMI)  $\geq 30$  kg/m<sup>2</sup>.

*Notes:* Patient height and weight should be reported in the Patient Characteristics section of the Administrative Related Data Elements, ICD 10 - Endocrine, nutritional and metabolic diseases; Obesity  
<http://apps.who.int/classifications/icd10/browse/2016/en#/E66>

*Source:* Stedman's Medical Dictionary, 28th ed, 2006

**OBESE** – BMI  $\geq 30$  and  $\leq 40$  kg/m<sup>2</sup>

*AQI XML Schema Element: <ICDValue>*

**MORBIDLY OBESE** – BMI  $> 40$  kg/m<sup>2</sup>

*AQI XML Schema Element: <ICDValue>*

**OBSTRUCTIVE SLEEP APNEA** – Sleep-disordered breathing with recurrent episodes of upper airway collapse and oxyhemoglobin desaturations diagnosed on sleep study by observing the number of apnea and/or hypopnea episodes per hour (the apnea-hypopnea index [AHI]) on an overnight polysomnography.

*Synonym:* OSA

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

*Note:* Cutoffs for AHI have been used to define the severity of OSA. The American Academy of Sleep Medicine defines mild OSA as AHI 5 to <15 events/h, moderate OSA as AHI 15 to 30 events/h, and severe OSA as AHI >30 events/h.

**DIAGNOSED BY SLEEP STUDY, ON TREATMENT** – Obstructive sleep apnea diagnosed using an overnight sleep study or polysomnography and there is current ongoing treatment with mechanical measures such as CPAP, BiPAP, or oral appliance therapy.

*AQI XML Schema Element:* <ICDValue>

**DIAGNOSED BY SLEEP STUDY, NO TREATMENT** – Obstructive sleep apnea diagnosed using an overnight sleep study or polysomnography and no current ongoing treatment.

*AQI XML Schema Element:* <ICDValue>

**OPEN WOUND (WITH OR WITHOUT INFECTION)** – A wound (trauma or incision) that disrupts the integrity of the skin and/or in which the tissues are exposed to the air.

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP - Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016-December 31, 2016); Stedman's Medical Dictionary

**RADIOTHERAPY FOR MALIGNANCY** – A patient who has received radiotherapy (ionizing radiation for treating or inhibiting cancer prior to the date of the Anesthesia Start Time<sup>1</sup>. Anatomic sites receiving radiotherapy are listed below.

*Source:* NSQIP-2011 VERSION

**NECK OR AIRWAY**

*AQI XML Schema Element:* <ICDValue>

**BREAST**

*AQI XML Schema Element:* <ICDValue>

**MEDIASTINUM**

*AQI XML Schema Element:* <ICDValue>

**OTHER**

*AQI XML Schema Element:* <ICDValue>

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

**RHEUMATOID ARTHRITIS OR COLLAGEN-VASCULAR DISEASE** – Rheumatoid arthritis is an autoimmune disease that causes inflammation, swelling, and damage to tissues in the joints while a collagen-vascular disease is one of a group of autoimmune diseases that produce inflammation and destruction of collagen and connective tissue.

Examples of Collagen Vascular Diseases: ankylosing spondylitis, dermatomyositis, polyarteritis nodosa, psoriatic arthritis, scleroderma/systemic sclerosis, systemic lupus erythematosus.

*AQI XML Schema Element:* <ICDValue>

*Source:* Elixhauser Comorbid Condition

**SEPSIS WITHIN 48 HOURS PRIOR TO SURGERY** – Presence of Sepsis or Septic Shock during the 48 hours prior to surgery.

*Source:* NSQIP - Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016-December 31, 2016)

**SEPSIS** – The presence of Systemic Inflammatory Response Syndrome (SIRS) [the presence of two of 5 signs: T>38° C, HR>90, RR>20/P<sub>CO2</sub>< 30 mmHg, WBC > 12 or < 4 X 10<sup>9</sup>/L, anion gap] and a positive blood culture or positive culture from site felt to be the acute cause of infection or one or more of (ischemic/infarcted bowel, purulence, enteric contents in operative site, positive intraoperative cultures.

*AQI XML Schema Element:* <ICDValue>

**SEPTIC SHOCK** – The presence of sepsis and documented organ or circulatory dysfunction.

*AQI XML Schema Element:* <ICDValue>

## OBSTETRIC

**PREGNANCY** – The patient is pregnant at the Anesthesia Start Time<sup>1</sup>. Pregnancy can be identified using (1) blood or urine pregnancy test; (2) ultrasound; or (3) fetal heart rate monitoring.

**GESTATIONAL AGE** is 1) the number of days from the beginning of the patient's last menstrual period, 2) based on obstetric ultrasound comparing the size of the embryo or fetus to a reference group of pregnancies with known gestational age, or 3) in the case of in-vitro fertilization, calculating the days since oocyte retrieval or co-incubation and adding 14 days.

*Note:* Gestational Age should be reported in weeks.

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP-2011 VERSION; Obstetric Data Definitions: Issues and Rationale for Change—Gestational Age & Term, from Patient Safety and Quality Improvement at American Congress of Obstetricians and Gynecologists, November 2012

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

**MULTIPLE GESTATION PREGNANCY** – The pregnant patient carries more than one fetus on the day of the Anesthesia Start Time<sup>1</sup>. Indicate number of fetuses.

**TWO (2)**

*AQI XML Schema Element: <ICDValue>*

**THREE (3)**

*AQI XML Schema Element: <ICDValue>*

**FOUR (4)**

*AQI XML Schema Element: <ICDValue>*

**MORE THAN FOUR (>4)**

*AQI XML Schema Element: <ICDValue>*

**PREGNANT WITH PREECLAMPSIA** – The patient is pregnant on the day of the Anesthesia Start Time<sup>1</sup> with preeclampsia consisting of new-onset hypertension and proteinuria. In absence of proteinuria, preeclampsia is diagnosed as hypertension in association with either (1) thrombocytopenia (platelet count < 100,000/ microliter); (2) impaired liver function; (3) renal insufficiency; (4) pulmonary edema; or (5) new onset cerebral or visual disturbances. Hypertension is defined as either a systolic BP of 140 mmHg or greater, diastolic BP of 90 mmHg or greater, or both. Proteinuria is defined when 24-hour excretion is equal to or greater than 300 mg.

*AQI XML Schema Element: <ICDValue>*

*Source: Hypertension in Pregnancy (ACOG)*

**PREGNANT WITH ECLAMPSIA** – The patient meets criteria for preeclampsia\* with the addition of seizures at any time prior to the Anesthesia Start Time<sup>1</sup>.

\* Criteria for Preeclampsia - The patient is pregnant on the day of the Anesthesia Start Time<sup>1</sup> with preeclampsia consisting of new-onset hypertension and proteinuria. In absence of proteinuria, preeclampsia is diagnosed as hypertension in association with either (1) thrombocytopenia (platelet count < 100,000/ microliter); (2) impaired liver function; (3) renal insufficiency; (4) pulmonary edema; or (5) new onset cerebral or visual disturbances. Hypertension is defined as either a systolic BP of 140 mmHg or greater, diastolic BP of 90 mmHg or greater, or both. Proteinuria is defined when 24-hour exertion is equal to or greater than 300 mg.

*AQI XML Schema Element: <ICDValue>*

*Source: Hypertension in Pregnancy (ACOG)*

**PREGNANT WITH HELLP SYNDROME** – The patient is pregnant on the day of the Anesthesia Start Time<sup>1</sup> with a diagnosis of the HELLP Syndrome. The HELLP syndrome is diagnosed when the following are present: (1) hemolysis; (2) abnormal liver function tests; (3) low platelet count (< 150,000 /microliter).

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

*AQI XML Schema Element: <ICDValue>*

*Source: Hypertension in Pregnancy (ACOG)*

**PREGNANT WITH PLACENTAL ABNORMALITY** – A disorder or pathology of the pregnant patient’s placenta.

**ABRUPTION** – The partial or complete separation of the placenta from the inner wall of the uterus prior to delivery of the baby.

*AQI XML Schema Element: <ICDValue>*

**PLACENTA PREVIA – WITHOUT HEMORRHAGE** –The attachment of the placenta to the inner wall of the uterus is in a location that partially or completely covers the uterine outlet (cervical opening), but there is no vaginal bleeding.

*AQI XML Schema Element: <ICDValue>*

**PLACENTA PREVIA – WITH HEMORRHAGE** –The attachment of the placenta to the inner wall of the uterus is in a location that partially or completely covers the uterine outlet (cervical opening), and there is vaginal bleeding.

*AQI XML Schema Element: <ICDValue>*

**PLACENTA ACCRETA** – An abnormal condition when part of or the entire placenta invades and is inseparable from the uterine wall.

*AQI XML Schema Element: <ICDValue>*

## ONCOLOGIC

**SOLID TUMOR WITH NO METASTASIS** – The presence of an abnormal, non-blood cell, cancerous tissue that grows by cellular proliferation more rapidly than normal and continues to grow after the stimuli that initiated the new growth cease, and there is no evidence of the cancer at a site distant from the primary tumor.

Primary location includes but is not limited to:

- Adrenal
- Bladder
- Bone
- Brain, CNS
- Breast
- Colon, rectum
- Heart
- Kidney
- Larynx, pharynx
- Liver
- Lung, bronchi
- Muscle
- Ovary
- Pancreas

- Prostate
- Sinus
- Skin
- Stomach
- Thyroid
- Uterus, endometrium

*AQI XML Schema Element: <ICDValue>*

*Source: Stedman's Medical Dictionary; Elixhauser Comorbid Condition*

**DISSEMINATED/METASTATIC CANCER** – The presence of malignant neoplasms in parts of the body remote from the site of the primary tumor.

*AQI XML Schema Element: <ICDValue>*

*Source: NSQIP - Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016-December 31, 2016); Elixhauser Comorbid Condition; Stedman's Medical Dictionary (modified)*

**LEUKEMIA** – Cancer of the blood forming tissues that results in an increased number of immature or abnormal blood cells.

*AQI XML Schema Element: <ICDValue>*

**LYMPHOMA** – Any neoplasm of lymphoid or reticuloendothelial tissues.

*AQI XML Schema Element: <ICDValue>*

*Source: Elixhauser Comorbid Condition; Stedman's Medical Dictionary (modified)*

## **PEDIATRIC**

### **MYOPATHY**

**MITOCHONDRIAL DISEASES** – A group of disorders caused by dysfunctional mitochondria, the intracellular organelles that generate energy.

*AQI XML Schema Element: <ICDValue>*

**MUSCULAR DYSTROPHIES** – A group of inherited chronic muscle diseases associated with increasing weakness and loss of skeletal muscles including but not limited to Duchenne muscular dystrophy (DMD), Becker muscular dystrophy, facioscapulohumeral muscular dystrophy, and myotonic dystrophy.

*Synonym: MD*

*AQI XML Schema Element: <ICDValue>*



**PRETERM NEWBORN PREMATURITY** – An infant born alive before 37 weeks of pregnancy are completed.

*Synonyms:* Premature newborn, preemie

*Source:* World Health Organization, revised November 2016

**EXTREMELY PRETERM** – An infant born alive less than 28 weeks of pregnancy are completed.

*AQI XML Schema Element:* <ICDValue>

**VERY PRETERM** – An infant born alive > 28 weeks to < 32 weeks of pregnancy are completed.

*AQI XML Schema Element:* <ICDValue>

**MODERATE TO LATE PRETERM** – An infant born alive > 32 weeks to < 37 weeks of pregnancy are completed.

*AQI XML Schema Element:* <ICDValue>

## **PULMONARY**

**ACUTE RESPIRATORY FAILURE** – A new, rapidly progressing disorder that prevents the lungs from adequately oxygenating blood or removing carbon dioxide and requires mechanical ventilation, high flow O2 therapy, or non-invasive ventilation for treatment.

*AQI XML Schema Element:* <ICDValue>

**CHRONIC RESPIRATORY CONDITIONS** – A progressive and irreversible disease of the lungs or airways.

*Notes:* ICD 10 - Diseases of the Respiratory System  
(<http://apps.who.int/classifications/icd10/browse/2016/en#/J44>)

*Source:* Mosby's Medical Dictionary, 9th ed, 2009

**ASTHMA** – A chronic respiratory disease characterized by inflammation and constriction of the airways of the lung.

*Note:* This includes patients with exercise-induced bronchoconstriction, allergic asthma, occupational asthma.

*AQI XML Schema Element:* <ICDValue>

**BRONCHIECTASIS** – An abnormal and irreversible widening of the airways of the lung.

*AQI XML Schema Element:* <ICDValue>

**BRONCHOPULMONARY DYSPLASIA** – A chronic lung disease in premature neonates treated for respiratory distress syndrome with more than 21% oxygen for more than 28 days.

*AQI XML Schema Element:* <ICDValue>

**CHRONIC OBSTRUCTIVE PULMONARY DISEASE** – An irreversible lung disease characterized by limited expiratory air flow. Examples include chronic bronchitis and emphysema.

*Synonym:* COPD

**MILD/MODERATE**

*AQI XML Schema Element:* <ICDValue>

**SEVERE** – Requiring one or more hospitalizations for COPD exacerbation (Gold criteria 3 or 4<sup>†</sup>)

† GOLD (Global Initiative for Chronic Obstructive Lung Disease) at <http://goldcopd.org>

*AQI XML Schema Element:* <ICDValue>

**CYSTIC FIBROSIS** – A hereditary, progressive disease in which thick, abnormal mucus builds up and compromises the function of the lungs and pancreas.

*Synonym:* CF

*AQI XML Schema Element:* <ICDValue>

**PULMONARY FIBROSIS** – An irreversible scarring or thickening of the capillary-alveolar membranes in the lung.

*AQI XML Schema Element:* <ICDValue>

**HOME OXYGEN THERAPY** – The patient's physician has determined that the patient has severe lung disease, hypoxia or symptoms that are improved with supplemental oxygen. Supplemental oxygen is used continuously or for shorter periods.

*AQI XML Schema Element:* <ICDValue>

*Source:* CMS statement on Home Oxygen Therapy; ICN 908804 October 2016

**RECENT PNEUMONIA** – Inflammation of the lung parenchyma characterized by consolidation of the affected part, the alveolar air spaces being filled with exudate, inflammatory cells, and fibrin occurring within 4 weeks of the Anesthesia Start Time<sup>1</sup>. Most cases of pneumonia are due to infection by bacteria or viruses, a few to inhalation of chemicals or trauma to the chest wall, and few to rickettsiae, fungi, and yeasts.

*AQI XML Schema Element:* <ICDValue>

*Source:* Stedman's Medical Dictionary, 28th ed, 2006

**RECENT URI** – Experiencing an acute infection involving the nose, paranasal sinus, pharynx, larynx, trachea, and/or bronchi within 4 weeks of the Anesthesia Start Time<sup>1</sup>.

*AQI XML Schema Element:* <ICDValue>

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

**VENTILATOR DEPENDENT** – Requiring mechanical support to maintain adequate levels of oxygen and/or carbon dioxide in the blood.

*AQI XML Schema Element:* <ICDValue>

## RENAL

**ACUTE RENAL FAILURE** – Acute renal failure, as defined by KDIGO\*, that is present within the 24 hours prior to the Anesthesia Start Time<sup>1</sup>.

\* KDIGO criteria under Acute Kidney Injury in the AQI NACOR DATA ELEMENT CONCEPTUAL DEFINITIONS are: 1. Increase in serum creatinine (Cr) > 0.3 mg/dl within 48 hours; 2. Increase in Cr to > 1.5 times baseline, which is known or presumed to have occurred within the prior 7 days.

*Synonyms:* Acute kidney injury, AKI, ARF

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP - Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016-December 31, 2016)

**CURRENTLY ON DIALYSIS** – Renal failure (acute or chronic) requiring treatment with dialysis (hemodialysis, peritoneal dialysis, hemofiltration) within 2 weeks of the date of the Anesthesia Start Time<sup>1</sup>.

*Note:* This should also include patients who require/warrant dialysis but have refused. It does not include patients who develop a need for dialysis after the Anesthesia Start Time<sup>1</sup>.

*AQI XML Schema Element:* <ICDValue>

*Source:* NSQIP - Preoperative Risk Assessment Section (ACS NSQIP Operations Manual; Effective July 1, 2016-December 31, 2016); Elixhauser Comorbid Condition

## SUBSTANCE USE

**SUBSTANCE USE** – An occasional or ongoing use of a chemical, drug, or alcohol that does not meet the criteria for Substance Use Disorder.

Adapted from <https://www.drugabuse.gov/drugs-abuse/commonly-abused-drugs-charts#inhalants>

*Note:* Indicate all substances used by the patient within 30 days prior to Anesthesia Start Time<sup>1</sup>.

### STIMULANTS

#### AMPHETAMINES

*AQI XML Schema Element:* <ICDValue>

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<sup>1</sup> Anesthesia Start Time is defined in the [Minimum Data Set section](#)

**METHAMPHETAMINE**

*AQI XML Schema Element: <ICDValue>*

**COCAINE**

*AQI XML Schema Element: <ICDValue>*

**EPHEDRINE**

*AQI XML Schema Element: <ICDValue>*

**KHAT**

*AQI XML Schema Element: <ICDValue>*

**PCP**

*AQI XML Schema Element: <ICDValue>*

**HALLUCINOGENS**

**KETAMINE**

*AQI XML Schema Element: <ICDValue>*

**LSD**

*AQI XML Schema Element: <ICDValue>*

**PSILOCYBIN/MUSHROOMS**

*AQI XML Schema Element: <ICDValue>*

**DMT**

*AQI XML Schema Element: <ICDValue>*

**DEPRESSANTS**

*AQI XML Schema Element: <ICDValue>*

**OPIATES**

*AQI XML Schema Element: <ICDValue>*

**KRATOM**

*AQI XML Schema Element: <ICDValue>*

**ALCOHOL**

*AQI XML Schema Element: <ICDValue>*

**GHB**

*AQI XML Schema Element: <ICDValue>*

**BENZODIAZEPINES**

*AQI XML Schema Element: <ICDValue>*

**BARBITURATES**

*AQI XML Schema Element: <ICDValue>*

**CANNABIS (INCLUDES SMOKING MARIJUANA AND OTHER FORMS OF INGESTION)**

*AQI XML Schema Element: <ICDValue>*

**INHALANTS (INCLUDES NITROUS OXIDE, VOLATILE ANESTHETICS, VOLATILE HOUSEHOLD PRODUCTS)**

*AQI XML Schema Element: <ICDValue>*

**PROPOFOL**

*AQI XML Schema Element: <ICDValue>*

**ALCOHOL USE DISORDER** – More than 14 drinks containing ethanol per week in the 2 weeks prior to the date of the Anesthesia Start Time<sup>1</sup>.

*Note:* Includes patients who consume 2 drinks per day in the two weeks prior to the date of the Anesthesia Start Time<sup>1</sup>; the patient admits to drinking >2 ounces of hard liquor or > two 12 oz. cans of beer or > two 6 oz. glasses of wine per day in the two weeks prior to the Anesthesia Start Time<sup>1</sup>. If the patient is a binge drinker, the numbers of drinks during the binge are divided by seven days and then the definition is applied.

*AQI XML Schema Element: <ICDValue>*

*Source:* Elixhauser Comorbid Condition

**SUBSTANCE USE DISORDER** – A pattern of chronic substance use leading to clinically significant impaired control, social impairment, risky use, or distress.

*Note:* Includes the abuse of any drug including but not limited to opioid, cocaine, narcotics, amphetamines, benzodiazepines; "Alcohol abuse" is a separate data element. The drug(s) being used should also be indicated in the SUBSTANCE USE category.

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<sup>1</sup>Anesthesia Start Time is defined in the [Minimum Data Set section](#)

*AQI XML Schema Element: <ICDValue>*

<sup>1</sup>Anesthesia Start Time is defined in the [Minimum Data Set section](#)

*Source:* Elixhauser Comorbid Condition -> DSM-5

**CURRENT SMOKER WITHIN ONE YEAR** – A person who has smoked cigarettes at any time within the 12 months prior to the date of the Anesthesia Start Time<sup>1</sup>.

*Note:* Does not include second hand smoke inhalation; does include an individual who smokes cigars, pipes, or other substances such as marijuana

*AQI XML Schema Element:* <ICDValue>

*Source:* McGraw-Hill Concise Dictionary of Modern Medicine, 2002

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<sup>1</sup>Anesthesia Start Time is defined in the [Minimum Data Set section](#)