

FORMAT and FILE SPECIFICATIONS
For
CALIFORNIA CORONARY ARTERY BYPASS GRAFT (CABG)
OUTCOMES REPORTING PROGRAM (CCORP)
Version 2.0

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State of California
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CALIFORNIA CORONARY ARTERY BYPASS GRAFT (CABG) OUTCOMES REPORTING PROGRAM (CCORP)

CABG Data Reporting Requirements

All state-licensed California hospitals performing coronary artery bypass graft (CABG) surgeries must submit every CABG record to CCORP. CCORP is charged with the collection of isolated and non-isolated CABG cases, CABG + Valve cases and CABG + Other cases. Hospitals must comply with the format and specifications for CCORP data submissions in order for data acceptance.

All hospitals submitting data to CCORP must comply with the format and specifications noted in this document, except those using the CCORP data collection tool, provided by OSHPD.

Beginning with the January through June 2006 data submission, hospitals must submit to CCORP a test report if **any** of the following conditions are met:

- There is a change in the data requirements in CCORP regulations Section 97174 or in the format and file specifications in Section 97182
- A hospital is using a data collection tool different from the one used in the prior data collection period
- A hospital using an STS approved software changes to a different STS software program (ex: hospital currently using Axis Clinical and changes to Goodroe)
- A hospital does not use the CCORP data collection tool

Test reports should contain at least one record that meets the data requirements in Section 97174 and the format specifications in Section 97182. The hospital should provide CCORP the test report 90 days prior to the due date for the hospital's next report. Each hospital is required to demonstrate compliance with the appropriate format and file specifications **before** CCORP will accept its file for the report period. CCORP will notify the hospital whether the submitted test report met the data requirements in the sections noted above.

Copies of the CCORP regulations can be found on our website at www.oshpd.ca.gov/HQAD/Outcomes/CCORP/index.htm. Section 97184 specifies report acceptance criteria.

STANDARD FORMAT AND SPECIFICATIONS FOR CCORP DATA SUBMISSION

STANDARD RECORD FORMAT

Deviation from the standard record format will not be accepted.

- Data submitted on a CD or diskette.
- The data file must be submitted as a comma-delimited text file with the extension of “.csv”
- Standard ASCII character coding.
- Data submitted for one hospital and one report period per file.
- Labels (column headers) identifying each data element are in the first row of data.
- Data elements are listed in proper export order (refer to pages 4-6).

ADDITIONAL REQUIREMENTS

- For STS software users:
 1. Refer to CCORP “special instructions” for all STS child fields
 2. Harvest coding not accepted

REFERENCES

Format indicates data type and data length. Data type is defined as:

- Alpha
- Integer (whole number only)
- Numeric
- Alphanumeric
- Date (mm/dd/yyyy)

**STANDARD FORMAT AND SPECIFICATIONS
FOR CCORP DATA SUBMISSIONS**

**EXPORT ORDER
(Effective 2006 Discharges)**

Data Element	Classification	Origin
1. Medical Record Number Identification	Identification	STS
2. Isolated CABG	Identification Non-STS	
3. Date of Surgery Identification		STS
4. Date of Birth	Identification STS	
5. Patient Age	Risk Factor: Demographic	STS
6. Gender	Risk Factor: Demographic	STS
7. Race	Risk Factor: Demographic	STS
8. Date of Discharge Identification		STS
9. Discharge Status	Identification STS	
10. Date of Death	Identification	STS
11. Responsible Surgeon Name	Identification STS	(Modified)
12. Responsible Surgeon California License Number	Identification Non-STS	
13. Height (cm)	Risk Factor: Demographic	STS
14. Weight (kg)	Risk Factor: Demographic	STS
15. Diabetes	Risk Factor: Comorbidity/Other	STS
16. Hypertension	Risk Factor: Comorbidity/Other	STS
17. Peripheral Vascular Disease	Risk Factor: Comorbidity/Other	STS
18. Cerebrovascular Disease	Risk Factor: Comorbidity/Other	STS
19. Cerebrovascular Accident	Risk Factor: Comorbidity/Other	STS
20. Cerebrovascular Accident Timing	Risk Factor: Comorbidity/Other	STS
21. Chronic Lung Disease	Risk Factor: Comorbidity/Other	STS
22. Immunosuppressive Treatment	Risk Factor: Comorbidity/Other	STS
23. Hepatic Failure	Risk Factor: Comorbidity/Other	Non-STS
24. Dialysis	Risk Factor: Comorbidity/Other	STS
25. Last Creatinine Level Preop (mg/dl)	Risk Factor: Comorbidity/Other	STS
26. Left Main Disease (% Stenosis)	Risk Factor: Hemodynamic Status	STS (Modified)

**STANDARD FORMAT AND SPECIFICATIONS
FOR CCORP DATA SUBMISSIONS**

**EXPORT ORDER - *continued*
(Effective 2006 Discharges)**

Data Element	Classification	Origin
27. Number of Diseased Coronary Vessels	Risk Factor: Hemodynamic Status	STS
28. Mitral Insufficiency	Risk Factor: Hemodynamic Status	STS (Modified)
29. Ejection Fraction Done	Risk Factor: Hemodynamic Status	STS
30. Ejection Fraction (%)	Risk Factor: Hemodynamic Status	STS
31. Ejection Fraction Method	Risk Factor: Hemodynamic Status	STS
32. Myocardial Infarction	Risk Factor: Cardiac	STS (Modified)
33. Myocardial Infarction Timing	Risk Factor: Cardiac	STS
34. Arrhythmia	Risk Factor: Cardiac	STS
35. Arrhythmia Type	Risk Factor: Cardiac	STS
36. Cardiogenic Shock	Risk Factor: Cardiac	STS
37. Angina	Risk Factor: Cardiac	STS
38. Angina Type	Risk Factor: Cardiac	STS (Modified)
39. Congestive Heart Failure	Risk Factor: Cardiac	STS
40. NYHA Classification	Risk Factor: Cardiac	STS
41. Resuscitation	Risk Factor: Cardiac	STS
42. Incidence	Risk Factor: Previous Intervention	STS
43. Previous Coronary Artery Bypass Graft (CABG)	Risk Factor: Previous Intervention	STS
44. Prior Percutaneous Coronary Intervention (PCI)	Risk Factor: Previous Intervention	STS
45. Interval from Prior PCI To Surgery	Risk Factor: Previous Intervention	STS
46. Status of Procedure	Risk Factor: Operative	STS

**STANDARD FORMAT AND SPECIFICATIONS
FOR CCORP DATA SUBMISSIONS**

**EXPORT ORDER - *continued*
(Effective 2006 Discharges)**

Data Element	Classification	Origin
47. CPB Utilization	Process of Care	STS
48. CPB Utilization – Combination	Process of Care	STS
49. Cardioplegia	Process of Care	STS
50. Internal Mammary Artery(ies) Used as Grafts	Process of Care	STS
51. Radial Artery Used	Process of Care	STS
52. Reoperation for Bleed/Tamponade	Reoperative Complications	STS
53. Reoperation for Graft Occlusion	Reoperative Complications	STS
54. Deep Sternal Wound Infection	Reoperative Complications	STS
55. Postoperative Stroke > 72 hours	Reoperative Complications	STS
56. Continuous Coma >= 24 hours	Reoperative Complications	STS
57. Prolonged Ventilation	Reoperative Complications	STS
58. Postoperative Renal Failure	Reoperative Complications	STS
59. Facility Identification Number	Identification Non-STS	

STANDARD FORMAT AND SPECIFICATIONS FOR CCORP DATA SUBMISSIONS

Data Element Specifications
Version 2.0a

1. MEDICAL RECORD NUMBER

Header/Short	Name:	MedRecN
	Data Length:	11
	Data Type:	Alphanumeric
	Valid Values:	Free text

Definition: Patient medical record number at the hospital where surgery was performed.

2. ISOLATED CABG

Header/Short	Name:	isocabg
	Data Length:	3
	Data Type:	Alpha
	Valid Values:	Yes; No

Definition: The patient's surgery is defined as follows: Answer 'No' if any of the procedures listed in Subsection (a)(2)(C)(i) was performed during coronary artery bypass graft surgery.

- (i) When any of the procedures listed in this Subsection is performed concurrently with the coronary artery bypass surgery, the surgery **will be considered non-isolated** and the data element coded 'No.' It is not possible to list all procedures because cases can be complex and clinical definitions are not always precise. When in doubt, the data abstractor should first seek an opinion from the responsible surgeon and then consult CCORP.
 - (a) Valve repairs or replacements
 - (b) Operations on structures adjacent to heart valves (papillary muscle, chordae tendineae, traebeculae carneaе cordis, annuloplasty, infundibulectomy)
 - (c) Ventriculectomy
 - (d) Repair of atrial and ventricular septa, excluding closure of patent foramen ovale
 - (e) Excision of aneurysm of heart
 - (f) Head and neck, intracranial endarterectomy

- (g) Other open heart surgeries, such as aortic arch repair, pulmonary endarterectomy
 - (h) Endarterectomy of aorta
 - (i) Thoracic endarterectomy (endarterectomy on an artery outside the heart)
 - (j) Heart transplantation
 - (k) Repair of certain congenital cardiac anomalies, excluding closure of patent foramen ovale (e.g., tetralogy of fallot, atrial septal defect (ASD), ventricular septal defect (VSD), valvular abnormality)
 - (l) Implantation of cardiomyostimulation systems. NOTE: Refers to cardiomyoplasty systems only; not other heart-assist systems such as pacemakers or internal cardiac defibrillators (ICDs)
 - (m) Any aortic aneurysm repair (abdominal or thoracic)
 - (n) Aorta-subclavian-carotid bypass
 - (o) Aorta-renal bypass
 - (p) Aorta-iliac-femoral bypass
 - (q) Caval-pulmonary artery anastomosis
 - (r) Extracranial-intracranial (EC-IC) vascular bypass
 - (s) Coronary artery fistula
 - (t) Full surgical Maze procedures, surgical or catheter. Requires that the left atrium be opened to create the 'maze' with incisions. Does not include "mini" Maze procedures limited to pulmonary vein isolation and/or amputation of the left atrial appendage.
 - (u) Resection of a lobe or segment of the lung (e.g., lobectomy or segmental resection of lung). Does not include simple biopsy of lung nodule in which surrounding lung is not resected, biopsy of a thoracic lymph node, or excision or stapling of an emphysematous bleb.
 - (u) Mastectomy for breast cancer (not simple breast biopsy)
 - (v) Amputation of any extremity (e.g., foot or toe)
- (ii) If a procedure listed in this subsection is performed concurrently with the coronary artery bypass surgery, the surgery **will be considered an isolated CABG** and the data element coded 'Yes,' unless a procedure listed in Subsection (a)(2)(C)(i) is performed during the same surgery. These particular procedures are listed because the Office has received frequent questions regarding their coding.
- (a) Transmyocardial laser revascularization (TMR)
 - (b) Pericardiectomy and excision of lesions of heart
 - (c) Repair/restoration of the heart or pericardium

- (d) Coronary endarterectomy
- (e) Pacemakers
- (f) Internal cardiac defibrillators (ICDs)
- (g) Fem-fem cardiopulmonary bypass (a form of cardiopulmonary bypass that should not be confused with aortofemoral bypass surgery listed in Subsection (a)(2)(C)(i))
- (h) Thymectomy
- (i) Thyroidectomy

3. DATE OF SURGERY

Header/Short	Name:	SurgDt
Data Length:		10
Data Type:		Date (mm/dd/yyyy)
Valid Values:		Between admission and computer system date

Definition: Patient date of surgery for the CABG procedure.

Special Instruction: Single-digit months and days must include a preceding zero.

4. DATE OF BIRTH

Header/Short	Name:	DOB
Data Length:		10
Data Type:		Date (mm/dd/yyyy)
Valid Values:		Before computer system date

Definition: Patient date of birth.

Special Instruction: Single-digit months and days must include a preceding zero.

5. PATIENT AGE

Header/Short	Name:	Age
Data Length:		3
Data Type:		Integer
Valid Values:		Calculated by hospital/user

Definition: Patient age in years, at time of surgery. This should be calculated from the Date of Birth and the Date of Surgery, according to convention used in the USA (the number of birth date anniversaries reached by the date of surgery).

6. GENDER

Header/Short	Name:	Gender
Data Length:		6
Data Type:		Alpha
Valid Values:		Male; Female

Definition: Patient gender at birth. Gender must be present for Risk Models to activate.

7. RACE

Header/Short	Name:	Race
Data Length:		15
Data Type:		Alpha
Valid Values:		Caucasian; Black; Hispanic; Asian; Native American; Other

Definition: Patient race or ethnicity as determined by the patient or family.

8. DATE OF DISCHARGE

Header/Short	Name:	DischDt
Data Length:		10
Data Type:		Date (mm/dd/yyyy)
Valid Values:		Between surgery and computer system date

Definition: Patient date of discharge. If the patient died in the hospital, the discharge date is the date of death.

Special Instruction: Single-digit months and days must include a preceding zero.

9. DISCHARGE STATUS

Header/Short	Name:	MtDCStat
Data Length:		5
Data Type:		Alpha
Valid Values:		Alive; Dead

Definition: Patient status upon discharge from the hospitalization in which surgery occurred.

10. DATE OF DEATH

Header/Short	Name:	MtDate
Data Length:		10
Data Type:		Date (mm/dd/yyyy)
Valid Values:		Date of discharge or between date of discharge and computer system date

Definition: Patient date of death.

Special Instruction: Single-digit months and days must include a preceding zero.

11. RESPONSIBLE SURGEON NAME (3 SEPARATE FIELDS)

- A) Surgeon Last Name
- B) Surgeon First Name
- C) Surgeon Middle Initial

Header/Short	Name:	SurgLname; SurgFname; SurgMI
Data Length:		25; 20; 1 (respectively)
Data Type:		Alpha
Valid Values:		Free text

Definition: The responsible surgeon is the surgeon as defined in Section 97170.

12. RESPONSIBLE SURGEON CALIFORNIA LICENSE NUMBER

Header/Short	Name:	surglicnum
Data Length:		8
Data Type:		Alphanumeric
Valid Values:		Free text

Definition: California physician license number of responsible surgeon, assigned by the Medical Board of California of the Department of Consumer Affairs.

13. HEIGHT (cm)

Header/Short	Name:	HeightCm
Data Length:		5
Data Type:		Numeric
Valid Values:		20.0 – 251.0

Definition: Height of the patient in centimeters.

14. WEIGHT (kg)

Header/Short	Name:	WeightKg
Data Length:		5
Data Type:		Numeric
Valid Values:		10.0 – 250.0

Definition: Weight of the patient in kilograms.

15. DIABETES

Header/Short	Name:	Diabetes
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: The patient has a history of diabetes, regardless of duration of disease or need for anti-diabetic agents. Includes on admission or preoperative diagnosis. Does not include gestational diabetes.

16. HYPERTENSION

Header/Short	Name:	Hypertn
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: The patient has a diagnosis of hypertension, documented by one of the following:

- (i) Documented history of hypertension diagnosed and treated with medication, diet and/or exercise.
- (ii) Blood pressure > 140 systolic or > 90 diastolic on at least 2 occasions.
- (iii) Currently on antihypertensive medication.

17. PERIPHERAL VASCULAR DISEASE

Header/Short	Name:	PVD
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

(Continued next page)

Definition: The patient has a history at any time prior to surgery of Peripheral Vascular Disease, as indicated by claudication either with exertion or rest; amputation for arterial insufficiency; aorto-iliac occlusive disease reconstruction; peripheral vascular bypass surgery, angioplasty, or stent; documented abdominal aortic aneurysm (AAA), AAA repair, or stent; positive non-invasive testing documented. Does not include procedures such as vein stripping, carotid disease, or procedures originating above the diaphragm.

18. CEREBROVASCULAR DISEASE

Header/Short	Name:	CVD
	Data Length:	3
	Data Type:	Alpha
	Valid Values:	Yes; No

Definition: The patient has a history at any time prior to surgery of Cerebrovascular Disease, documented by any one of the following: unresponsive coma > 24 hours; cerebrovascular accident (CVA) (symptoms > 72 hours after onset); reversible ischemic neurological deficit (RIND) (recovery within 72 hours of onset); transient ischemic attack (TIA) (recovery within 24 hours of onset); non-invasive carotid test with > 75% occlusion; or prior carotid surgery. Does not include neurological disease processes such as metabolic and/or anoxic ischemic encephalopathy.

19. CEREBROVASCULAR ACCIDENT

Header/Short	Name:	CVA
	Data Length:	3
	Data Type:	Alpha
	Valid Values:	Yes; No

Definition: The patient has a history, at any time prior to surgery, of a central neurologic deficit persisting more than 72 hours. (I.e. extremity weakness or loss of motion, loss of consciousness, loss of speech, field cuts). Chart documentation of a prior diagnosis of CVA or stroke is sufficient.

20. CEREBROVASCULAR ACCIDENT TIMING

Header/Short	Name:	CVAWhen
	Data Length:	16
	Data Type:	Alphanumeric
	Valid Values:	Recent (<=2 wk.); Remote (>2 wk.)

(Continued next page)

Definition: Events occurring within two weeks of the surgical procedure are considered recent (≤ 2 weeks); all others are considered remote (> 2 weeks).

21. CHRONIC LUNG DISEASE

Header/Short	Name:	ChrLungD
Data Length:		8
Data Type:		Alpha
Valid Values:		No; Mild; Moderate; Severe

Definition: If the patient has chronic lung disease, the severity level according to the following classification is:

- (i) No: There is no chronic lung disease present.
- (ii) Mild: Forced expiratory volume in one second (FEV1) 60% to 75% of predicted, and/or on chronic inhaled or oral bronchodilator therapy.
- (iii) Moderate: FEV1 50-59% of predicted, and/or on chronic steroid therapy aimed at lung disease.
- (iv) Severe: FEV1 $< 50\%$ predicted, and/or room air partial pressure of oxygen (pO₂) < 60 or room air partial pressure of carbon dioxide (pCO₂) > 50 .

22. IMMUNOSUPPRESSIVE TREATMENT

Header/Short	Name:	ImmSupp
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: The patient has used any form of immunosuppressive therapy (i.e., systemic steroid therapy) within 30 days preceding the operative procedure. Does not include topical applications and inhalers or one time systemic therapy.

23. HEPATIC FAILURE

Header/Short	Name:	hepafail
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: The patient has cirrhosis or other liver disease **and** has a bilirubin greater than 2mg/dl **and** a serum albumin less than 3.5 grams/dl.

24. DIALYSIS

Header/Short	Name:	Dialysis
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: The patient is currently undergoing dialysis.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Renal Failure.

25. LAST CREATININE LEVEL PREOP (mg/dl)

Header/Short	Name:	CreatLst
Data Length:		4
Data Type:		Numeric
Valid Values:		0.1 - 30.0

Definition: The most recent creatinine level prior to surgery. A creatinine level should be collected on all patients for consistency, even if they have no prior history. A creatinine value is a high predictor of a patient's outcome and is used in the predicted risk models.

26. LEFT MAIN DISEASE (% Stenosis)

Header/Short	Name:	Lmstenpct
Data Length:		3
Data Type:		Integer
Valid Values:		0 – 100

Definition: Percentage of compromise of vessel diameter in any angiographic view.

27. NUMBER OF DISEASED CORONARY VESSELS

Header/Short	Name:	NumDisV
Data Length:		5
Data Type:		Alpha
Valid Values:		None; One; Two; Three

(Continued next page)

Definition: The number of major coronary vessel systems (Left anterior descending (LAD) system, Circumflex system, and/or Right system) with $\geq 50\%$ narrowing in any angiographic view. NOTE: Left main disease ($\geq 50\%$) is counted as TWO vessels (LAD and Circumflex). For example, left main and right coronary artery (RCA) would count as three total.

28. MITRAL INSUFFICIENCY

Header/Short	Name:	VDInsufM
Data Length:		8
Data Type:		Alpha
Valid Values:		None; Trivial; Mild; Moderate; Severe

Definition: Whether there is evidence of mitral valve regurgitation.

29. EJECTION FRACTION DONE

Header/Short	Name:	HDEFD
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Indicate whether the Ejection Fraction was measured prior to the induction of anesthesia.

30. EJECTION FRACTION (%)

Header/Short	Name:	HDEF
Data Length:		2
Data Type:		Integer
Valid Values:		1 – 99

Definition: The percentage of blood emptied from the ventricle at the end of the contraction. Use the most recent determination prior to intervention.

31. EJECTION FRACTION METHOD

Header/Short	Name:	HDEFMeth
Data Length:		15
Data Type:		Alpha
Valid Values:		LV Gram; Radionucleotide; Estimate; ECHO

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Definition: Method of obtaining ejection fraction measurement information:

- (i) LV Gram: Left Ventriculogram.
- (ii) Radionucleotide: MUGA Scan.
- (iii) Estimate: From other calculations, based upon available clinical data.
- (iv) ECHO: Echocardiogram.

32. MYOCARDIAL INFARCTION

Header/Short	Name:	MI
	Data Length:	3
	Data Type:	Alpha
	Valid Values:	Yes; No

Definition: Refers to any myocardial infarction (MI) patient had in the past. For MIs prior to the current hospitalization for which detailed records are not available, chart documentation in which a clinician caring for the patient diagnosed an MI is sufficient. For MIs during the current hospitalization for which detailed records are available, conditions i and ii below must be met:

- (i) The patient must have been diagnosed with a myocardial infarction (ST elevation or non ST elevation) by a clinician caring for patient.
- (ii) At least 1 of the 3 following biochemical indicators for detecting myocardial necrosis must be present:
 - (a) Troponin T or I:
 - (1) Maximal concentration of troponin T or I exceeding the MI diagnostic limit (99th percentile of the values for a reference control group, as defined in Subsection (32)(C)(iii)) on at least one occasion during the first 24 hours after the index clinical event.
 - (b) CK-MB:
 - (1) Maximal value of CK-MB more than two times the upper limit of normal on at least one occasion during the first 24 hours after the index clinical event.
 - (2) Maximal value of CK-MB, preferable CK-MB mass, exceeding 99th percentile of the values for a reference control group, as defined in Subsection (32)(C)(iii), on two successive samples during the first 24 hours after the index clinical event.
 - (c) Total CK: *(Continued next page)*

(c) Total CK:

(1) In the absence of availability of a troponin or CK-MB assay, total CK more than two times the upper limit of normal (99th percentile of the values for a reference control group, as defined in Subsection (32)(C)(iii)), or the B fraction of CK may be employed, but these last two biomarkers are considerably less satisfactory than CK-MB.

(iii) Reference control values (MI diagnostic limit and upper limit of normal):

(a) Reference values must be determined in each laboratory by studies using specific assays with appropriate quality control, as reported in peer-reviewed journals.

Acceptable imprecision (coefficient of variation) at the 99th percentile for each assay should be defined as less than or equal to 10 percent. Each individual laboratory should confirm the range of reference values in their specific setting.

33. MYOCARDIAL INFARCTION TIMING

Header/Short	Name:	MIWhen
Data Length:		18
Data Type:		Alphanumeric
Valid Values:		<=6 Hrs; >6 Hrs but <24 Hrs; 1 to 7 Days; 8 to 21 Days; >21 Days

Definition: The time period between the last documented myocardial infarction and the CABG surgery.

34. ARRHYTHMIA

Header/Short	Name:	Arrhyth
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Whether there is a history of preoperative arrhythmia (sustained ventricular tachycardia, ventricular fibrillation, atrial fibrillation, atrial flutter, third degree heart block) that has been clinically documented or treated with any of the following treatment modalities within two weeks prior to the CABG surgery:

(i) Ablation therapy

(ii) AICD

(Continued next page)

- (iii) Pacemaker
- (iv) Pharmacological treatment
- (v) Electrocardioversion

35. ARRHYTHMIA TYPE

Header/Short	Name:	ArrhyTyp
Data Length:		12
Data Type:		Alpha
Valid Values:		Sust VT/VF; Heart Block; AFib/Flutter; None

Definition: The type of arrhythmia present within two weeks prior to the procedure is:

- (i) Sustained Ventricular Tachycardia or Ventricular Fibrillation requiring cardioversion and/or intravenous amiodarone.
- (ii) Third degree Heart Block.
- (iii) Atrial fibrillation/flutter requiring medication.
- (iv) None.

36. CARDIOGENIC SHOCK

Header/Short	Name:	CarShock
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: The patient, at the time of procedure, is in a clinical state of hypoperfusion according to either of the following criteria:

- (i) Systolic blood pressure (BP) < 80 and/or Cardiac Index (CI) < 1.8 despite maximal treatment.
- (ii) Intravenous inotropes and/or intra-aortic balloon pump (IABP) necessary to maintain Systolic BP > 80 and/or CI > 1.8.

37. ANGINA

Header/Short	Name:	Angina
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: The patient has ever had angina pectoris.

38. ANGINA TYPE

Header/Short	Name:	AngType
Data Length:		8
Data Type:		Alpha
Valid Values:		Stable; Unstable

Definition: The type of angina present within 24 hours prior to the CABG surgery is:

- (i) **Stable:** Angina not meeting unstable criteria below that is controlled by oral or transcutaneous medication.
- (ii) **Unstable:** Requires continuous hospitalization from the episode until surgery and one of the following:
 - (a) Angina at rest.
 - (b) New onset angina in past 2 months of at least Canadian Cardiovascular Society (CCS) Class III.
 - (c) Increasing angina in past 2 months – angina that has become more frequent, longer in duration, or lower in threshold; and increased by greater than or equal to 1 CCS class to at least CCS Class III severity.

39. CONGESTIVE HEART FAILURE

Header/Short	Name:	CHF
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Indicate whether, within 2 weeks prior to the initial surgical procedure, a physician has diagnosed that the patient is currently in congestive heart failure (CHF). CHF can be diagnosed based on careful history and physical exam, or by one of the following criteria:

- (i) Paroxysmal nocturnal dyspnea (PND).
- (ii) Dyspnea on exertion (DOE) due to heart failure.
- (iii) Chest X-Ray (CXR) showing pulmonary congestion.
- (iv) Pedal edema or dyspnea and receiving diuretics or digoxin.

40. NYHA CLASSIFICATION

Header/Short	Name:	ClassNYH
Data Length:		9
Data Type:		Alpha
Valid Values:		Class I; Class II; Class III; Class IV

(Continued next page)

Definition: New York Heart Association (NYHA) Classification represents the overall functional status of the patient in relationship to both congestive heart failure and angina. Code the highest level leading to episode of hospitalization and/or procedure.

- (i) Class I = Patients with cardiac disease but without resulting limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea or anginal pain.
- (ii) Class II = Patients with cardiac disease resulting in slight limitation of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitations, dyspnea or anginal pain.
- (iii) Class III = Patients with cardiac disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary physical activity results in fatigue, palpitations, dyspnea, or anginal pain.
- (iv) Class IV = Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms of cardiac insufficiency or of the anginal syndrome may be present even at rest. If any physical activity is undertaken, discomfort is increased.

41. RESUSCITATION

Header/Short	Name:	Resusc
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Indicate whether the patient required cardiopulmonary resuscitation within one hour before the start of the operative procedure.

42. INCIDENCE

Header/Short	Name:	Incidenc
Data Length:		43
Data Type:		Alpha
Valid Values:		First cardiovascular surgery; First re-op cardiovascular surgery; Second re-op cardiovascular surgery; Third re-op cardiovascular surgery; Fourth or more re-op cardiovascular surgery

(Continued next page)

Definition: Whether this is the patient's:

- (i) First cardiovascular surgery
- (ii) First re-op cardiovascular surgery
- (iii) Second re-op cardiovascular surgery
- (iv) Third re-op cardiovascular surgery
- (v) Fourth or more re-op cardiovascular surgery

43. PREVIOUS CORONARY ARTERY BYPASS GRAFT

Header/Short	Name:	PrCAB
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Indicate whether the patient had a previous coronary artery bypass graft prior to the current admission.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Previous CV Intervention.

44. PRIOR PERCUTANEOUS CORONARY INTERVENTION (PCI)

Header/Short	Name:	POCPCI
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Indicate whether a previous Percutaneous Cardiac Intervention (PCI) was performed any time prior to this surgical procedure. PCI refers to those treatment procedures that unblock narrowed coronary arteries without performing surgery. PCI may include, but is not limited to: balloon catheter angioplasty, percutaneous transluminal angioplasty (PTCA), rotational atherectomy, directional atherectomy, extraction atherectomy, laser atherectomy and intracoronary stent placement.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Previous CV Intervention.

45. INTERVAL FROM PRIOR PCI TO SURGERY

Header/Short	Name:	POCPCIIn
Data Length:		9
Data Type:		Alphanumeric

(Continued next page)

Valid Values: <=6 Hours; >6 Hours

Definition: Indicate the interval of time between the previous PCI and the current surgical procedure:

- (i) <=6 Hours
- (ii) >6 Hours

46. STATUS OF PROCEDURE

Header/Short	Name:	Status
Data Length:		16
Data Type:		Alpha
Valid Values:		Emergent Salvage; Emergent; Urgent; Elective

Definition: The status that best describes the clinical status of the patient at the time of surgery.

Emergent Salvage: The patient is undergoing cardiopulmonary resuscitation en route to the operating room or prior to anesthesia induction.

Emergent: The patient's clinical status includes any of the following:

- (b) Ischemic dysfunction (any of the following):
 - (2) Ongoing ischemia including rest angina despite maximal medical therapy (medical and/or intra-aortic balloon pump (IABP));
 - (3) Acute evolving Myocardial Infarction within 24 hours before surgery; or
 - (4) Pulmonary edema requiring intubation.
- (b) Mechanical dysfunction (either of the following):
 - (1) Shock with circulatory support; or
 - (2) Shock without circulatory support.

Urgent: ALL of the following conditions are met:

- (a) Not elective status
- (b) Not emergent status
- (c) Procedure required during same hospitalization in order to minimize chance of further clinical deterioration.
- (d) Worsening, sudden chest pain; congestive heart failure (CHF); acute myocardial infarction (AMI); coronary anatomy; IABP; unstable angina (USA) with intravenous nitroglycerin; rest angina, valve dysfunction; or aortic dissection.

Elective: The patient's status has been stable in the days or weeks prior to the operation. The procedure could be deferred without increased risk of compromised cardiac outcome.

47. CPB UTILIZATION

Header/Short	Name:	CPBUtil
Data Length:		11
Data Type:		Alpha
Valid Values:		None; Combination; Full

Definition: Indicate the level of CPB or coronary perfusion used during the procedure.

- (i) None: no CPB or coronary perfusion used during the procedure
- (ii) Combination: with or without CPB and/or with or without coronary perfusion at any time during the procedure
 - (a) At start of procedure: No CPB/No Coronary Perfusion -> conversion to -> CPB
 - (b) At start of procedure: No CPB/No Coronary Perfusion -> conversion to -> Coronary perfusion
 - (c) At start of procedure: No CPB/No Coronary Perfusion -> conversion to -> Coronary perfusion -> conversion to -> CPB
- (ii) Full: CPB or coronary perfusion was used for the entire procedure.

48. CPB UTILIZATION COMBINATION

Header/Short	Name:	CPBCmb
Data Length:		9
Data Type:		Alpha
Valid Values:		Planned; Unplanned

Definition: Whether the combination procedure was a planned or an unplanned conversion:

- (i) Planned: the surgeon intended to treat with any of the combination options described in "CPB utilization"
- (ii) Unplanned: the surgeon did not intend to treat with any of the combination options described in "CPB utilization".

49. CARDIOPLEGIA

Header/Short	Name:	Cplegia
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

(Continued next page)

Definition: Cardioplegia was used.

50. INTERNAL MAMMARY ARTERY(IES) USED AS GRAFTS

Header/Short	Name:	IMAArtUs
Data Length:		9
Data Type:		Alpha
Valid Values:		Left IMA; Right IMA; Both IMAs; No IMA

Definition: Internal Mammary Artery(ies) (IMA) used for grafts, if any.

- (i) Left IMA
- (ii) Right IMA
- (iii) Both IMAs
- (iv) No IMA

51. RADIAL ARTERY USED

Header/Short	Name:	RadArtUs
Data Length:		12
Data Type:		Alpha
Valid Values:		No Radial; Left Radial; Right Radial; Both Radials

Definition: Indicate which radial artery(ies) was/were used for grafts:

- (i) No Radial artery
- (ii) Left Radial artery
- (iii) Right Radial artery
- (iv) Both Radial arteries

52. REOPERATION FOR BLEED/TAMPONADE

Header/Short	Name:	COpReBld
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Whether an operative re-intervention was required for bleeding/tamponade.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

53. REOPERATION FOR GRAFT OCCLUSION

Header/Short	Name:	COpReGft
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Whether an operative re-intervention was required for coronary graft occlusion.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

54. DEEP STERNAL WOUND INFECTION

Header/Short	Name:	CIStDeep
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Indicate whether patient had a deep sternal infection involving muscle, bone, and/or mediastinum **REQUIRING OPERATIVE INTERVENTION.**

Must have ALL of the following conditions:

- (i) Wound opened with excision of tissue (I&D) or re-exploration of mediastinum
- (ii) Positive culture
- (iii) Treatment with antibiotics

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

55. POSTOPERATIVE STROKE > 72 HOURS

Header/Short	Name:	CNStrokP
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Indicate whether a central neurologic deficit persisting postoperatively for more than 72 hours.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

56. CONTINUOUS COMA >= 24 HOURS

Header/Short	Name:	CNComa
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: A new postoperative coma that persists for at least 24 hours secondary to anoxic/ischemic and/or metabolic encephalopathy, thromboembolic event or cerebral bleed.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

57. PROLONGED VENTILATION

Header/Short	Name:	CPVntLng
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Pulmonary insufficiency requiring a ventilator. Include (but not limited to) causes such as ARDS and pulmonary edema and/or any patient requiring mechanical ventilation for more than 24 hours postoperatively.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

58. POSTOPERATIVE RENAL FAILURE

Header/Short	Name:	CRenFail
Data Length:		3
Data Type:		Alpha
Valid Values:		Yes; No

Definition: Acute or worsening renal failure resulting in one or more of the following:

- (i) Increase of serum creatinine to > 2.0 and 2x most recent preoperative creatinine level.
- (ii) A new requirement of dialysis postoperatively.

Special Instructions for STS software users: CCORP requires the Null to be filled with "No". This is a child field for Complications.

59. FACILITY IDENTIFICATION NUMBER

Header/Short	Name:	hospitalid
	Data Length:	6
	Data Type:	Numeric
	Valid Values:	Free Text

Definition: The six-digit facility identification number assigned to each hospital by the Office, as defined in Section 97170.