DukeCath Dataset Dictionary

Variables Included in Version 1.1 Release

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CATHETERIZATION IDENTIFICATION AND LINKING

Variable Name (Type)	DAYSFROMINDEX (Numeric)
Label	Days from Index Cath
	Stats
N	155980
Mean (SD)	682.1 (1460.7)
Median (25th, 75th)	0.0 (0.0, 483.0)
Min, Max	0.0, 10442.0
Description	
For each unique patient, this variable records the days from the date of the first catheterization for that patient that is recorded in the Duke Health System since 1/1/1985 to this catheterization date. This will be 0 if the catheterization is the first recorded procedure. Because multiple caths may occur on the same day, it is possible for multiple caths to have the same value for this variable.	

Variable Name (Type)	SEQCATHNUM (Numeric)
Label	Patient's Sequential Cath Number
	Stats
N	155980
Mean (SD)	2.5 (3.1)
Median (25th, 75th)	1.0 (1.0, 3.0)
Min, Max	1.0, 65.0
Description	
For each unique patient, this variable records the sequential number for the current catheterization record. For example, if seqcathnum=1 then this is the first recorded Duke catheterization since 1/1/1985 for this patient. If seqcathnum=2, then this record is the second Duke catheterization. The database does not contain information on catheterizations received outside of the Duke Health System.	

CATHETERIZATION IDENTIFICATION AND LINKING

Variable Name (Type)	SUBJID (Numeric)
Label	Subject ID
	Stats
N	155980
Mean (SD)	49800.5 (28811.7)
Median (25th, 75th)	49728.5 (24843.0, 74549.0)
Min, Max	0.0, 100000.0
Description	
Unique patient identifier	

Variable Name (Type)		YRCATH_G (Numeric)
Label		Year of Cardiac Cath (categorized)
Value	**Format**	**Stats**
1	1985-1990	32445 / 155980 (20.8%)
2	1991-1994	22474 / 155980 (14.4%)
3	1995-1998	21789 / 155980 (14.0%)
4	1999-2002	24119 / 155980 (15.5%)
5	2003-2006	23642 / 155980 (15.2%)
6	2007-2010	18111 / 155980 (11.6%)
7	2011-2013	13400 / 155980 (8.6%)
Description		
The calendar year in which this catheterization occurred. Years have been grouped: ’1985-1990’, ’1991-1994’, ’1995-1998’, ’1999-2002’, ’2003-2006’, ’2007-2010’, and ’2011-2013’.		

DEMOGRAPHICS

Variable Name	(Type)	AGE_G (Numeric)
Label		Age in years (categorized)
Value	**Format**	**Stats**
1	18-24	820 / 155980 (0.5%)
2	25-29	1074 / 155980 (0.7%)
3	30-34	2032 / 155980 (1.3%)
4	35-39	4476 / 155980 (2.9%)
5	40-44	9167 / 155980 (5.9%)
6	45-49	14373 / 155980 (9.2%)
7	50-54	18950 / 155980 (12.1%)
8	55-59	22056 / 155980 (14.1%)
9	60-64	23235 / 155980 (14.9%)
10	65-69	22431 / 155980 (14.4%)
11	70-74	17855 / 155980 (11.4%)
12	75-79	11931 / 155980 (7.6%)
13	>=80	7580 / 155980 (4.9%)
Description		
Age at the time of catheterization in years. Age has been grouped: ’18-<25’, ’25-<30’, ’30-<35’, ’35-<40’, ’40-<45’, ’45-<50’, ’50-<55’, ’55-<60’, ’60-<65’, ’65-<70’, ’70-<75’, ’75-<80’, and ’>=80’		

Variable Name	(Type)	GENDER (Numeric)
Label		Gender
Value	**Format**	**Stats**
0	Male	97565 / 155980 (62.5%)
1	Female	58415 / 155980 (37.5%)
Description		
Sex as recorded in the Duke Health System		

DEMOGRAPHICS

Variable Name	(Type)	RACE_G (Numeric)
Label		Race
Value	**Format**	**Stats**
1	Caucasian	119005 / 155980 (76.3%)
2	African American	28146 / 155980 (18.0%)
3	Other	6189 / 155980 (4.0%)
.	Missing	2640 / 155980 (1.7%)
Description		
Race as recorded in the Duke Health System		

PATIENT HISTORY

Variable Name	(Type)	ACS (Numeric)
Label		Acute Coronary Syndrome Status Upon Presentation
Value	**Format**	**Stats**
0	No ACS	82419 / 155980 (52.8%)
1	STEMI	21747 / 155980 (13.9%)
2	Non-STEMI	10111 / 155980 (6.5%)
3	MI Unspecified	2814 / 155980 (1.8%)
4	Unstable Angina	38889 / 155980 (24.9%)
Description		
Acute coronary syndrome, coronary artery disease symptom status at the time of presentation		

PATIENT HISTORY

Variable Name	(Type)	CHFSEV (Numeric)
Label		CHF Severity (NYHA Class)
Value	**Format**	**Stats**
0	None	114373 / 155980 (73.3%)
1	I	4639 / 155980 (3.0%)
2	II	9004 / 155980 (5.8%)
3	III	13310 / 155980 (8.5%)
4	IV	9444 / 155980 (6.1%)
.	Missing	5210 / 155980 (3.3%)

Description

Congestive heart failure severity is defined as the worst dyspnea or functional class in the previous 2 weeks, coded as the New York Heart Association (NYHA) classification. Congestive heart failure is defined as evidence of fluid retention due to cardiac causes. There should be a history of one or more of the following: exertional dyspnea, orthopnea, paroxysmal nocturnal dyspnea, rales, pulmonary congestion on x-ray, or a ventricular gallop. Prior to 1994, a 6 week window was used for past CHF sx severity. Also, the classification included transient CHF as Class V. Transient CHF sx (Class V) has been converted to Class I. Class I - patient has cardiac disease but without resulting limitations of ordinary physical activity. Ordinary physical activity (e.g., walking several blocks or climbing stairs) does not cause undue fatigue, palpitation, dyspnea, or anginal pain. Limiting symptoms may occur with marked exertion. Class II - Patient has cardiac disease resulting in slight limitation of ordinary physical activity. Patient is comfortable at rest. Ordinary physical activity such as walking more than two blocks or climbing more than one flight of stairs results in limiting symptoms (e.g., fatigue, palpitation, dyspnea, or anginal pain). Class III - Patient has cardiac disease resulting in marked limitation of physical activity. Patient is comfortable at rest. Less than ordinary physical activity (e.g., walking one to two level blocks or climbing one flight of stairs) causes fatigue, palpitation, dyspnea, or anginal pain. Class IV - Patient has symptoms at rest that increase with any physical activity. Patient has cardiac disease resulting in inability to perform any physical activity without discomfort. Symptoms may be present even at rest. If any physical activity is undertaken, discomfort is increased.

Variable Name	(Type)	DIALYSIS (Numeric)
Label		Patient Currently on Dialysis
Value	**Format**	**Stats**
0	No	102822 / 155980 (65.9%)
1	Yes	2127 / 155980 (1.4%)
.	Missing	51031 / 155980 (32.7%)

Description

Patient is currently on dialysis. This information was not collected before implementation of the Duke Information System for Cardiovascular Care (DISCC).

PATIENT HISTORY

Variable Name (Type)	DPCABG (Numeric)
Label	Days to Closest Previous Coronary Artery Bypass Surgery
	Stats
N	28874
Mean (SD)	2629.8 (2081.4)
Median (25th, 75th)	2285.0 (877.0, 3934.0)
Min, Max	1.0, 12950.0
Description	
Days from this catheterization to the closest preceding CABG. If no previous CABG is identified, then the value is set to missing. The previous procedure may not have been performed at Duke.	

Variable Name (Type)	DPMI (Numeric)
Label	Days to Closest Previous Myocardial Infarction
	Stats
N	68212
Mean (SD)	1004.8 (1942.3)
Median (25th, 75th)	16.0 (2.0, 1100.0)
Min, Max	0.0, 21802.0
Description	
Days from this catheterization to the closest preceding myocardial infarction. If no previous MI is identified, then the value is set to missing.	

Variable Name (Type)	DPPCI (Numeric)
Label	Days to Closest Previous Percutaneous Coronary Intervention
	Stats
N	38669
Mean (SD)	882.6 (1314.1)
Median (25th, 75th)	259.0 (88.0, 1170.0)
Min, Max	0.0, 11058.0
Description	
Days from this catheterization to the closest preceding Percutaneous Coronary Intervention. If no previous PCI is identified, then the value is set to missing. The previous procedure may not have been performed at Duke.	

PATIENT HISTORY

Variable Name	(Type)	DPVALVE (Numeric)
Label		Days to Closest Previous Valve Repair or Replacement Surgery
		Stats
N		3000
Mean (SD)		2207.5 (2129.9)
Median (25th, 75th)		1668.0 (548.0, 3310.0)
Min, Max		1.0, 16298.0
Description		
Days from this catheterization to the closest preceding valve repair or replacement surgery. If no previous valve surgery is identified, then the value is set to missing. The previous procedure may not have been performed at Duke.		

Variable Name	(Type)	HXANGINA (Numeric)
Label		History of Angina
Value	**Format**	**Stats**
0	No	32271 / 155980 (20.7%)
1	Yes	123135 / 155980 (78.9%)
.	Missing	574 / 155980 (0.4%)
Description		
History of anginal pain ever (excluding myocardial infarction pain)		

Variable Name	(Type)	HXCEREB (Numeric)
Label		History of Cerebrovascular Disease
Value	**Format**	**Stats**
0	No	139425 / 155980 (89.4%)
1	Yes	16555 / 155980 (10.6%)
Description		
History of a stroke, a transient ischemic attack, hemiplegia, carotid surgery or stenting. An asymptomatic bruit is not included in the definition.		

PATIENT HISTORY

Variable Name	(Type)	HXCHF (Numeric)
Label		History of CHF
Value	**Format**	**Stats**
0	No	104455 / 155980 (67.0%)
1	Yes	49113 / 155980 (31.5%)
.	Missing	2412 / 155980 (1.5%)
Description		
History of congestive heart failure not due to acute MI. This is defined as physician documentation or report of any of the following clinical symptoms of heart failure described as unusual dyspnea on light exertion, recurrent dyspnea occurring in the supine position, fluid retention; or the description of rales, jugular venous distension, pulmonary edema on physical exam, or pulmonary edema on chest x-ray presumed to be cardiac dysfunction. A low ejection fraction alone, without clinical evidence of heart failure does not qualify as heart failure.		

Variable Name	(Type)	HXCOPD (Numeric)
Label		History of COPD
Value	**Format**	**Stats**
0	No	145353 / 155980 (93.2%)
1	Yes	10627 / 155980 (6.8%)
Description		
History of chronic obstructive pulmonary disease (COPD). The data collection form changed in 1990 when a specific option for COPD was added to the life-threatening comorbidity section of the form. Prior to this, information was collected as a free text field.		

Variable Name	(Type)	HXCTDZ (Numeric)
Label		History of Connective Tissue Disease
Value	**Format**	**Stats**
0	No	154014 / 155980 (98.7%)
1	Yes	1966 / 155980 (1.3%)
Description		
History of connective tissue disease. The data collection form changed in 1990 when a specific option for connective tissue disease (collagen vascular disease) was added to the life-threatening comorbidity section of the form. Prior to this, information was collected as a free text field.		

PATIENT HISTORY

Variable Name	(Type)	HXDIAB (Numeric)
Label		History of Diabetes
Value	**Format**	**Stats**
0	No	114466 / 155980 (73.4%)
1	Yes	41514 / 155980 (26.6%)
Description		
A previous physician diagnosis of diabetes mellitus. The patient need not be under current therapy for diabetes, nor is current lab data or lab verification required. This does not differentiate between Type I and Type II diabetes.		

Variable Name	(Type)	HXHTN (Numeric)
Label		History of Hypertension
Value	**Format**	**Stats**
0	No	59615 / 155980 (38.2%)
1	Yes	96365 / 155980 (61.8%)
Description		
Clinically significant hypertension by history. This does not depend upon a history of treatment; documentation by blood pressure determination is not required.		

Variable Name	(Type)	HXHYL (Numeric)
Label		History of Hyperlipidemia
Value	**Format**	**Stats**
0	No	72831 / 155980 (46.7%)
1	Yes	83149 / 155980 (53.3%)
Description		
Previous diagnosis and/or treatment of hypercholesterolemia by a physician. Current lipid lab data was not used in the definition.		

PATIENT HISTORY

Variable Name	(Type)	HXLEUK (Numeric)
Label		History of Leukemia
Value	**Format**	**Stats**
0	No	104771 / 155980 (67.2%)
1	Yes	178 / 155980 (0.1%)
.	Missing	51031 / 155980 (32.7%)
Description		
History of leukemia (acute or chronic - lymphocytic or myelogenous, polycythemia). This information was not collected before implementation of the Duke Information System for Cardiovascular Care (DISCC).		

Variable Name	(Type)	HXLIVER (Numeric)
Label		History of Liver Disease (mild or with clinical sequelae)
Value	**Format**	**Stats**
0	No	103991 / 155980 (66.7%)
1	Yes	958 / 155980 (0.6%)
.	Missing	51031 / 155980 (32.7%)
Description		
History of liver disease (mild or with clinical sequelae). This information was not collected before implementation of the Duke Information System for Cardiovascular Care (DISCC).		

Variable Name	(Type)	HXLYMPH (Numeric)
Label		History of Lymphoma
Value	**Format**	**Stats**
0	No	104549 / 155980 (67.0%)
1	Yes	400 / 155980 (0.3%)
.	Missing	51031 / 155980 (32.7%)
Description		
History of lymphoma. This information was not collected before implementation of the Duke Information System for Cardiovascular Care (DISCC).		

PATIENT HISTORY

Variable Name	(Type)	HXMETAST (Numeric)
Label		History of Metastatic Cancer
Value	**Format**	**Stats**
0	No	104623 / 155980 (67.1%)
1	Yes	326 / 155980 (0.2%)
.	Missing	51031 / 155980 (32.7%)
Description		
History of any metastatic malignancy. This information was not collected before implementation of the Duke Information System for Cardiovascular Care (DISCC).		

Variable Name	(Type)	HXMI (Numeric)
Label		History of Myocardial Infarction
Value	**Format**	**Stats**
0	No	87768 / 155980 (56.3%)
1	Yes	68212 / 155980 (43.7%)
Description		
History of a prior myocardial infarction. An MI is recorded during this admission and prior to catheterization only if the patient has documentation or typical evolutionary ECG changes with a consistent clinical history.		

Variable Name	(Type)	HXPEPULC (Numeric)
Label		History of Peptic Ulcer Disease
Value	**Format**	**Stats**
0	No	101185 / 155980 (64.9%)
1	Yes	3764 / 155980 (2.4%)
.	Missing	51031 / 155980 (32.7%)
Description		
History of peptic ulcer disease. This information was not collected before implementation of the Duke Information System for Cardiovascular Care (DISCC).		

PATIENT HISTORY

Variable Name	(Type)	HXPVD (Numeric)
Label		History of Peripheral Vascular Disease
Value	**Format**	**Stats**
0	No	139221 / 155980 (89.3%)
1	Yes	16759 / 155980 (10.7%)
Description		
History of peripheral vascular disease (below the diaphragm - symptoms or repair). This includes claudication, amputation, PVI, surgical intervention, positive test, and AAA surg/stent.		

Variable Name	(Type)	HXRENAL (Numeric)
Label		History of Renal Disease
Value	**Format**	**Stats**
0	No	102199 / 155980 (65.5%)
1	Yes	2750 / 155980 (1.8%)
.	Missing	51031 / 155980 (32.7%)
Description		
History of renal disease, defined by serum creatinine >3.0, dialysis, or renal transplant. This information was not collected before implementation of the Duke Information System for Cardiovascular Care (DISCC).		

Variable Name	(Type)	HXSMOKE (Numeric)
Label		History of Smoking
Value	**Format**	**Stats**
0	No	67956 / 155980 (43.6%)
1	Yes	88024 / 155980 (56.4%)
Description		
History of smoking		

PATIENT HISTORY

Variable Name	(Type)	HXTUMOR (Numeric)
Label		History of Solid Tumor
Value	**Format**	**Stats**
0	No	101657 / 155980 (65.2%)
1	Yes	3292 / 155980 (2.1%)
.	Missing	51031 / 155980 (32.7%)
Description		
History of solid tumor, initially treated within the last 5 years. This information was not collected before implementation of the Duke Information System for Cardiovascular Care (DISCC).		

Variable Name	(Type)	NUMPRMI (Numeric)
Label		Number of Previous MIs
		Stats
N		155980
Mean (SD)		0.6 (0.8)
Median (25th, 75th)		0.0 (0.0, 1.0)
Min, Max		0.0, 10.0
Description		
Number of previous myocardial infarctions (counts 1 MI per day).		

VITAL SIGNS

Variable Name	(Type)	DIASBP_A (Numeric)
Label		Diastolic Blood Pressure (mmHg) (excluding extremes)
		Stats
N		145834
Mean (SD)		77.4 (14.0)
Median (25th, 75th)		78.0 (69.0, 86.0)
Min, Max		20.0, 150.0
Description		
Diastolic Blood Pressure (mmHg), omitting extreme values: <20 or >150		

VITAL SIGNS

Variable Name (Type)	DIASBP_R (Numeric)
Label	Diastolic Blood Pressure (mmHg) (as reported)
	Stats
N	145892
Mean (SD)	77.4 (14.1)
Median (25th, 75th)	78.0 (69.0, 86.0)
Min, Max	1.0, 210.0
Description	
Diastolic Blood Pressure (mmHg) as reported in patient record	

Variable Name (Type)	PULSE_A (Numeric)
Label	Heart Rate (bpm) (excluding extremes)
	Stats
N	151347
Mean (SD)	74.8 (18.5)
Median (25th, 75th)	72.0 (63.0, 83.0)
Min, Max	30.0, 250.0
Description	
Heart Rate (bpm), omitting extreme values: < 30 or > 250.	

Variable Name (Type)	PULSE_R (Numeric)
Label	Heart Rate (bpm) (as reported)
	Stats
N	151581
Mean (SD)	75.0 (19.7)
Median (25th, 75th)	72.0 (63.0, 83.0)
Min, Max	13.0, 297.0
Description	
Heart Rate (bpm) as recorded in the patient record	

VITAL SIGNS

Variable Name (Type)	SYSBP_A (Numeric)
Label	Systolic Blood Pressure (mmHg) (excluding extremes)
	Stats
N	146564
Mean (SD)	136.4 (25.4)
Median (25th, 75th)	134.0 (120.0, 151.0)
Min, Max	50.0, 250.0
Description	
Systolic Blood Pressure (mmHg) omitting extreme values: < 50 or > 250.	

Variable Name (Type)	SYSBP_R (Numeric)
Label	Systolic Blood Pressure (mmHg) (as reported)
	Stats
N	146599
Mean (SD)	136.4 (25.5)
Median (25th, 75th)	134.0 (120.0, 151.0)
Min, Max	36.0, 299.0
Description	
Systolic Blood Pressure (mmHg) as recorded in the patient record	

PHYSICAL EXAMINATION (PERFORMED PRIOR TO CARDIAC CATHETERIZATION)

Variable Name (Type)	BMI_A (Numeric)
Label	Body Mass Index (kg/m^2) (excluding extremes)
	Stats
N	154312
Mean (SD)	28.5 (6.5)
Median (25th, 75th)	27.5 (24.4, 31.4)
Min, Max	6.6, 100.0
Description	
Body Mass Index, calculated from Height (cm) and Weight (kg). The formula is: (wt/(ht^2))*10000. Extreme values are omitted (< 5 or > 100).	

PHYSICAL EXAMINATION (PERFORMED PRIOR TO CARDIAC CATHETERIZATION)

Variable Name (Type)	BMI_R (Numeric)
Label	Body Mass Index (kg/m^2) (as reported)
	Stats
N	154352
Mean (SD)	28.5 (7.0)
Median (25th, 75th)	27.5 (24.4, 31.4)
Min, Max	6.6, 266.7
Description	
Body Mass Index, calculated from Height (cm) and Weight (kg). The formula is: (wt/(ht^2))*10000	

Variable Name (Type)	BSA_A (Numeric)
Label	Body Surface Area, Du Bois algorithm (m^2) (excluding extremes)
	Stats
N	154347
Mean (SD)	2.0 (0.2)
Median (25th, 75th)	2.0 (1.8, 2.1)
Min, Max	1.0, 3.1
Description	
Body Surface area, calculated from Height (cm) and Weight (kg) .The formula (DuBois) is: .007184*(wt^.425)*(ht^.725). Extreme values are omitted (< 1 or > 3.5).	

Variable Name (Type)	BSA_R (Numeric)
Label	Body Surface Area, Du Bois algorithm (m^2) (as reported)
	Stats
N	154352
Mean (SD)	2.0 (0.2)
Median (25th, 75th)	2.0 (1.8, 2.1)
Min, Max	0.8, 3.1
Description	
Body Surface area, calculated from Height (cm) and Weight (kg) .The formula (DuBois) is: .007184*(wt^.425)*(ht^.725)	

PHYSICAL EXAMINATION (PERFORMED PRIOR TO CARDIAC CATHETERIZATION)

Variable Name	(Type)	CBRUITS (Numeric)
Label		Carotid Bruits
Value	**Format**	**Stats**
0	No	142204 / 155980 (91.2%)
1	Yes	12853 / 155980 (8.2%)
.	Missing	923 / 155980 (0.6%)
Description		
Carotid bruits detected during physical examination prior to catheterization. Bruits can be left, right, or bilateral.		

Variable Name	(Type)	HEIGHT_A (Numeric)
Label		Height (cm) (excluding extremes)
		Stats
N		154462
Mean (SD)		171.4 (10.2)
Median (25th, 75th)		173.0 (164.0, 180.0)
Min, Max		122.0, 211.0
Description		
Height (cm), omitting extreme values: < 122 or > 213		

Variable Name	(Type)	HEIGHT_R (Numeric)
Label		Height (cm) (as reported)
		Stats
N		154555
Mean (SD)		171.3 (10.3)
Median (25th, 75th)		173.0 (164.0, 180.0)
Min, Max		80.0, 220.0
Description		
Height (cm) as recorded in the patient record		

PHYSICAL EXAMINATION (PERFORMED PRIOR TO CARDIAC CATHETERIZATION)

Variable Name	(Type)	S3 (Numeric)
Label		Third Heart Sound
Value	**Format**	**Stats**
0	No	145361 / 155980 (93.2%)
1	Yes	6793 / 155980 (4.4%)
.	Missing	3826 / 155980 (2.5%)
Description		
S3 gallop or the third heart sound detected.		

Variable Name	(Type)	WEIGHT_A (Numeric)
Label		Weight (kg) (excluding extremes)
		Stats
N		153682
Mean (SD)		83.5 (19.4)
Median (25th, 75th)		82.0 (70.0, 94.0)
Min, Max		40.0, 170.0
Description		
Weight in kilograms with extreme values omitted: < 40 or > 170		

Variable Name	(Type)	WEIGHT_R (Numeric)
Label		Weight (kg) (as reported)
		Stats
N		154568
Mean (SD)		83.9 (20.5)
Median (25th, 75th)		82.0 (70.0, 95.0)
Min, Max		30.0, 200.0
Description		
Weight in kilograms as recorded in the patient record		

LABORATORY RESULTS (PRIOR TO CARDIAC CATHETERIZATION, CLOSEST VALUE WITHIN 1 YEAR)

Variable Name (Type)	CREATININE_A (Numeric)
Label	Serum Creatinine (mg/dL) (excluding extremes)
	Stats
N	121058
Mean (SD)	1.2 (0.9)
Median (25th, 75th)	1.0 (0.9, 1.3)
Min, Max	0.1, 9.0
Description	
Most recent Serum Creatinine (mg/dL) within 1 year preceding or on the day of this catheterization. Extreme values have been omitted: < 0.10 or > 9.0	

Variable Name (Type)	CREATININE_R (Numeric)
Label	Serum Creatinine (mg/dL) (as reported)
	Stats
N	122034
Mean (SD)	1.3 (1.7)
Median (25th, 75th)	1.0 (0.9, 1.3)
Min, Max	0.0, 142.0
Description	
Most recent Serum Creatinine (mg/dL) within 1 year preceding or on the day of this catheterization	

Variable Name (Type)	DPCHOL (Numeric)
Label	Days from Total Cholesterol acquisition to cath
	Stats
N	59912
Mean (SD)	24.3 (63.8)
Median (25th, 75th)	1.0 (0.0, 6.0)
Min, Max	0.0, 365.0
Description	
Use the closest date of the total cholesterol laboratory measurements preceding or on the day of this catheterization, but no more than 365 days before this catheterization. This variable is the days from that lab measure date to this catheterization date.	

LABORATORY RESULTS (PRIOR TO CARDIAC CATHETERIZATION, CLOSEST VALUE WITHIN 1 YEAR)

Variable Name (Type)	DPCREAT (Numeric)
Label	Days from Serum Creatinine acquisition to cath
	Stats
N	122034
Mean (SD)	3.8 (24.5)
Median (25th, 75th)	0.0 (0.0, 0.0)
Min, Max	0.0, 365.0
Description	
Use the closest date of the serum creatinine laboratory measurements preceding or on the day of this catheterization, but no more than 365 days before this catheterization. This variable is the days from that lab measure date to this catheterization date.	

Variable Name (Type)	DPHDL (Numeric)
Label	Days from HDL acquisition to cath
	Stats
N	58877
Mean (SD)	24.5 (64.1)
Median (25th, 75th)	1.0 (0.0, 6.0)
Min, Max	0.0, 365.0
Description	
Use the closest date of the HDL laboratory measurements preceding or on the day of this catheterization, but no more than 365 days before this catheterization. This variable is the days from that lab measure date to this catheterization date.	

Variable Name (Type)	DPLDL (Numeric)
Label	Days from LDL acquisition to cath
	Stats
N	53776
Mean (SD)	26.9 (67.9)
Median (25th, 75th)	1.0 (0.0, 7.0)
Min, Max	0.0, 365.0
Description	
Use the closest date of the LDL laboratory measurements preceding or on the day of this catheterization, but no more than 365 days before this catheterization. This variable is the days from that lab measure date to this catheterization date.	

LABORATORY RESULTS (PRIOR TO CARDIAC CATHETERIZATION, CLOSEST VALUE WITHIN 1 YEAR)

Variable Name	(Type)	EGFR_EPI_G (Numeric)
Label		eGFR Calculated Using the CKD EPI Formula (mL/min per 1.73 m^2) excluding extremes (categorized)
Value	**Format**	**Stats**
1	<15	3591 / 155980 (2.3%)
2	15-<30	4004 / 155980 (2.6%)
3	30-<45	11114 / 155980 (7.1%)
4	45-<60	19315 / 155980 (12.4%)
5	60-<90	54516 / 155980 (35.0%)
6	>=90	29175 / 155980 (18.7%)
.	Missing	34265 / 155980 (22.0%)
Description		
GFR Stage, determined from estimated Glomerular Filtration Rate (eGFR) within 1 year preceding or on the day of this catheterization. Stages: >=90 (normal or high), 60-90 (mildly decreased), 45-59 (mildly or moderately decreased), 30-44 (moderately to severely decreased), 15-29 (severely decreased), or <15 (kidney failure). eGFR is calculated according to the CKD-EPI formula. When the patient is on dialysis, the value is set to <15. Extreme values of creatinine have been omitted in this calculation (if not on dialysis and serum creatinine is < 0.10 or > 9.0). For more information on the calculation of eGFR, refer to https://www.niddk.nih.gov/health-information/health-communication-programs/nkdep/lab-evaluation/gfr/estimating/Pages/estimating.aspx.		

Variable Name	(Type)	HDL_A (Numeric)
Label		High Density Lipid (mg/dL) (excluding extremes)
		Stats
N		58874
Mean (SD)		43.2 (15.6)
Median (25th, 75th)		40.0 (33.0, 50.0)
Min, Max		0.0, 251.0
Description		
Most recent High Density Lipid (mg/dL) within 1 year preceding or on the day of this catheterization. Extreme values have been omitted: > 300.		

LABORATORY RESULTS (PRIOR TO CARDIAC CATHETERIZATION, CLOSEST VALUE WITHIN 1 YEAR)

Variable Name (Type)	HDL_R (Numeric)
Label	High Density Lipid (mg/dL) (as reported)
	Stats
N	58877
Mean (SD)	43.3 (26.2)
Median (25th, 75th)	40.0 (33.0, 50.0)
Min, Max	0.0, 5135.0
Description	
Most recent High Density Lipid (mg/dL) within 1 year preceding or on the day of this catheterization	

Variable Name (Type)	LDL_A (Numeric)
Label	Low Density Lipid (mg/dL) (excluding extremes)
	Stats
N	53758
Mean (SD)	103.1 (40.1)
Median (25th, 75th)	99.0 (75.0, 126.0)
Min, Max	1.0, 609.0
Description	
Most recent Low Density Lipid (mg/dL) within 1 year preceding or on the day of this catheterization. Extreme values have been omitted: <0.8 or > 800.	

Variable Name (Type)	LDL_R (Numeric)
Label	Low Density Lipid (mg/dL) (as reported)
	Stats
N	53776
Mean (SD)	103.1 (40.6)
Median (25th, 75th)	99.0 (75.0, 126.0)
Min, Max	-37.0, 1313.0
Description	
Most recent Low Density Lipid (mg/dL) within 1 year preceding or on the day of this catheterization	

LABORATORY RESULTS (PRIOR TO CARDIAC CATHETERIZATION, CLOSEST VALUE WITHIN 1 YEAR)

Variable Name (Type)	TOTCHOL_A (Numeric)
Label	Total Cholesterol (mg/dL) (excluding extremes)
	Stats
N	59912
Mean (SD)	177.7 (51.0)
Median (25th, 75th)	174.0 (144.0, 206.0)
Min, Max	0.0, 874.0
Description	
Most recent Total Cholesterol (mg/dL) within 1 year preceding or on the day of this catheterization. Extreme values have been omitted: > 1500.	

Variable Name (Type)	TOTCHOL_R (Numeric)
Label	Total Cholesterol (mg/dL) (as reported)
	Stats
N	59912
Mean (SD)	177.7 (51.0)
Median (25th, 75th)	174.0 (144.0, 206.0)
Min, Max	0.0, 874.0
Description	
Most recent Total Cholesterol (mg/dL) within 1 year preceding or on the day of this catheterization	

CATHETERIZATION PROCEDURE

Variable Name (Type)		BMS (Numeric)
Label		Bare Metal Stent Placed During Cath
Value	**Format**	**Stats**
0	No	140590 / 155980 (90.1%)
1	Yes	15390 / 155980 (9.9%)
Description		
Bare Metal Stent is placed during this catheterization		

CATHETERIZATION PROCEDURE

Variable Name	(Type)	CATHAPPR (Numeric)
Label		Type of Cardiac Catheterization (approach)
Value	**Format**	**Stats**
0	Unknown	3883 / 155980 (2.5%)
1	Right Heart Only	9672 / 155980 (6.2%)
2	Left Heart Only	115067 / 155980 (73.8%)
3	Right and Left Heart	27358 / 155980 (17.5%)
Description		
The catheterization approach: Right, left or both.		

Variable Name	(Type)	DES (Numeric)
Label		Drug Eluting Stent Placed During Cath
Value	**Format**	**Stats**
0	No	147740 / 155980 (94.7%)
1	Yes	8240 / 155980 (5.3%)
Description		
Drug Eluting Stent Placed During this Catheterization.		

Variable Name	(Type)	DIAGCATH (Numeric)
Label		Diagnostic Coronary Cath
Value	**Format**	**Stats**
0	No	16227 / 155980 (10.4%)
1	Yes	139753 / 155980 (89.6%)
Description		
This is a diagnostic coronary cardiac catheterization (i.e., with an available arteriogram).		

Variable Name	(Type)	INTCCOTH (Numeric)
Label		Percutaneous Intervention other than BMS, DES or POBA
Value	**Format**	**Stats**
0	No	154572 / 155980 (99.1%)
1	Yes	1408 / 155980 (0.9%)
Description		
A type of percutaneous coronary intervention other than a balloon angioplasty (POBA) or a stent was performed during this catheterization.		

CATHETERIZATION PROCEDURE

Variable Name	(Type)	INTVCATH (Numeric)
Label		Interventional Coronary Cath
Value	**Format**	**Stats**
0	No	117550 / 155980 (75.4%)
1	Yes	38430 / 155980 (24.6%)
Description		
Catheterization procedure which included some form of a percutaneous coronary intervention.		

Variable Name	(Type)	POBA (Numeric)
Label		Balloon Angioplasty without Other Percutaneous Intervention
Value	**Format**	**Stats**
0	No	142107 / 155980 (91.1%)
1	Yes	13873 / 155980 (8.9%)
Description		
Balloon angioplasty was the only percutaneous coronary intervention performed.		

CATHETERIZATION RESULTS

Variable Name	(Type)	AORTINS (Numeric)
Label		Aortic Valve Insufficiency
Value	**Format**	**Stats**
0	Absent	3694 / 155980 (2.4%)
1	Mild	2415 / 155980 (1.5%)
2	Moderate	1361 / 155980 (0.9%)
3	Severe	688 / 155980 (0.4%)
5	Catheter-induced	9 / 155980 (0.0%)
6	Trace	521 / 155980 (0.3%)
.	Missing	147292 / 155980 (94.4%)
Description		
The severity of aortic valve insufficiency (regurgitation)		

CATHETERIZATION RESULTS

Variable Name	(Type)	AORTSTEN (Numeric)
Label		Aortic Valve Stenosis
Value	**Format**	**Stats**
0	Absent	10379 / 155980 (6.7%)
1	Mild (>1.0 cm^2)	910 / 155980 (0.6%)
2	Moderate (0.7-1.0 cm^2)	910 / 155980 (0.6%)
3	Severe (<0.7 cm^2)	1417 / 155980 (0.9%)
.	Missing	142364 / 155980 (91.3%)
Description		
The extent of stenosis of the aortic valve		

Variable Name	(Type)	CORDOM (Numeric)
Label		Coronary Dominance
Value	**Format**	**Stats**
1	Left	12978 / 155980 (8.3%)
2	Right	132061 / 155980 (84.7%)
3	Balanced	4939 / 155980 (3.2%)
.	Missing	6002 / 155980 (3.8%)
Description		
Dominance of the coronary tree: right, left or balanced. This is based on the coronary flow provided by the posterior descending artery.		

Variable Name	(Type)	GRAFTST (Numeric)
Label		Maximum Stenosis in any Graft
		Stats
N		18188
Mean (SD)		79.0 (33.5)
Median (25th, 75th)		100.0 (75.0, 100.0)
Min, Max		0.0, 100.0
Description		
Maximum percent stenosis detected across all coronary artery bypass grafts.		

CATHETERIZATION RESULTS

Variable Name (Type)	LADST (Numeric)
Label	Maximum Stenosis of the Left Anterior Descending Artery
	Stats
N	124250
Mean (SD)	56.1 (38.9)
Median (25th, 75th)	70.0 (25.0, 95.0)
Min, Max	0.0, 100.0
Description	
Maximum percent stenosis in all major arteries of the left anterior descending arterial system	

Variable Name (Type)	LCXST (Numeric)
Label	Maximum Stenosis of the Left Circumflex Artery
	Stats
N	121770
Mean (SD)	47.3 (40.7)
Median (25th, 75th)	50.0 (0.0, 95.0)
Min, Max	0.0, 100.0
Description	
Maximum percent stenosis across the Left Circumflex Arterial system	

Variable Name (Type)	LMST (Numeric)
Label	Maximum Stenosis of the Left Main Artery
	Stats
N	129087
Mean (SD)	11.1 (22.0)
Median (25th, 75th)	0.0 (0.0, 20.0)
Min, Max	0.0, 100.0
Description	
Maximum percent stenosis of the left main coronary artery	

CATHETERIZATION RESULTS

Variable Name (Type)	LVEF_A (Numeric)
Label	Left Ventricular Ejection Fraction (%) (excluding extremes)
	Stats
N	89262
Mean (SD)	54.2 (14.3)
Median (25th, 75th)	56.8 (45.5, 64.5)
Min, Max	5.0, 90.0
Description	
Left Ventricular Ejection Fraction (%) as measured during left ventriculogram, omitting extreme values: <5.0 or > 90.	

Variable Name (Type)	LVEF_R (Numeric)
Label	Left Ventricular Ejection Fraction (%) (as reported)
	Stats
N	89316
Mean (SD)	54.2 (14.3)
Median (25th, 75th)	56.8 (45.5, 64.6)
Min, Max	0.0, 97.0
Description	
Left Ventricular Ejection Fraction (%) as measured during left ventriculogram.	

Variable Name (Type)		MITSTEN (Numeric)
Label		Mitral Valve Stenosis
Value	**Format**	**Stats**
0	Absent	2096 / 155980 (1.3%)
1	Mild (>1.5 cm^2)	558 / 155980 (0.4%)
2	Moderate (1.0-1.5 cm^2)	787 / 155980 (0.5%)
3	Severe (<1.0 cm^2)	751 / 155980 (0.5%)
.	Missing	151788 / 155980 (97.3%)
Description		
Severity of mitral valve stenosis		

CATHETERIZATION RESULTS

Variable Name	(Type)	MRGRADE (Numeric)
Label		Mitral Regurgitation Grade (Left Ventriculogram)
Value	**Format**	**Stats**
0	None	67420 / 155980 (43.2%)
1	I	9575 / 155980 (6.1%)
2	II	5225 / 155980 (3.3%)
3	III	2132 / 155980 (1.4%)
4	IV	1506 / 155980 (1.0%)
.	Missing	70122 / 155980 (45.0%)
Description		
Mitral valve regurgitation grade (severity)		

Variable Name	(Type)	NUMDZV (Numeric)
Label		Number of Significantly Diseased Vessels (major arterial regions)
Value	**Format**	**Stats**
0	None	40355 / 155980 (25.9%)
1	One	42232 / 155980 (27.1%)
2	Two	25771 / 155980 (16.5%)
3	Three	30099 / 155980 (19.3%)
.	Missing	17523 / 155980 (11.2%)
Description		
Number of arterial systems with significant occlusion in a major segment. Prior to 7/1/2007, the threshold for defining a significant lesion was 75% or greater. Beginning 7/1/2007, the threshold for determining significance was changed to 50%. The coding of this variable is determined by physician judgment. Taken into account by the cathing physicians is the coronary dominance (left, right, or balanced). For example, the number of diseased vessels in a right dominant heart takes into consideration equally, the right coronary, left anterior descending, and left circumflex systems. However, left or balanced dominance as well as extent of left main disease will result in greater consideration of the left systems and potentially little or no contribution from the right coronary system. This variable will be missing if no arteriograms were performed during catheterization.		

CATHETERIZATION RESULTS

Variable Name (Type)	PRXLADST (Numeric)
Label	Maximum Stenosis of the Proximal Left Anterior Descending Artery
	Stats
N	124129
Mean (SD)	24.7 (35.3)
Median (25th, 75th)	0.0 (0.0, 50.0)
Min, Max	0.0, 100.0
Description	
Maximum percent stenosis in the proximal segmant of the left anterior descending arterial system	

Variable Name (Type)	RCAST (Numeric)
Label	Maximum Stenosis of the Right Coronary Artery
	Stats
N	122356
Mean (SD)	51.1 (41.2)
Median (25th, 75th)	50.0 (5.0, 95.0)
Min, Max	0.0, 100.0
Description	
Maximum percent stenosis in the Right Coronary Arterial system	

Variable Name (Type)		VALVEDZ (Numeric)
Label		Valvular Heart Disease (Final Impressions)
Value	**Format**	**Stats**
0	No	147961 / 155980 (94.9%)
1	Yes	8019 / 155980 (5.1%)
Description		
Valvular heart disease (aortic, mitral, any)		

FOLLOW-UP: ALL DAYS TO EVENT VARIABLES ARE CENSORED IN DEC2014

Variable Name	(Type)	DAYS2LKA (Numeric)
Label		Days to Last Known Alive
		Stats
N		155980
Mean (SD)		3458.9 (2645.0)
Median (25th, 75th)		3030.0 (1195.0, 5235.0)
Min, Max		0.0, 10937.0
Description		
Days from this catheterization to the last date that the patient was known to be alive. This will be zero for patients without any follow-up and whose vital status is alive. For deceased patients this is the number of days from this catheterization to date of death. Events and follow-up are censored in Dec2014.		

Variable Name	(Type)	DEATH (Numeric)
Label		Vital Status at Last Contact
Value	**Format**	**Stats**
0	Alive	72930 / 155980 (46.8%)
1	Deceased	83050 / 155980 (53.2%)
Description		
Indicator for whether the patient died or was still alive at end of follow-up. Follow-up censored in Dec2014.		

Variable Name	(Type)	DSCABG (Numeric)
Label		Days to First Subsequent Coronary Artery Bypass Surgery
		Stats
N		34741
Mean (SD)		961.7 (1631.6)
Median (25th, 75th)		27.0 (4.0, 1428.0)
Min, Max		0.0, 10179.0
Description		
Days from this catheterization to the first subsequent CABG. If the patient is never treated with CABG, then the value is set to missing. Event is censored in Dec2014. The subsequent procedure may not have been performed at Duke.		

FOLLOW-UP: ALL DAYS TO EVENT VARIABLES ARE CENSORED IN DEC2014

Variable Name (Type)	DSHOSP (Numeric)
Label	Days to First Subsequent Hospitalization for Any Cause
	Stats
N	115119
Mean (SD)	931.0 (1351.3)
Median (25th, 75th)	305.0 (62.0, 1290.0)
Min, Max	1.0, 10547.0
Description	
Days from this catheterization to the first subsequent hospitalization for any cause. If a subsequent hospitalization was not reported then the value is set to missing. Event is censored in Dec2014. The subsequent hospitalization may have occurred at a Duke or a non-Duke hospital. Hospital admissions on the same day as the catheterization procedure are not included.	

Variable Name (Type)	DSMI (Numeric)
Label	Days to First Subsequent Non-Fatal Myocardial Infarction
	Stats
N	18807
Mean (SD)	1965.4 (1919.7)
Median (25th, 75th)	1409.0 (394.0, 2982.0)
Min, Max	0.0, 10308.0
Description	
Days from this catheterization to the first subsequent MI. If there is no evidence of a subsequent MI, then the value is set to missing. Event is censored in Dec2014.	

Variable Name (Type)	DSPCI (Numeric)
Label	Days to First Subsequent Percutaneous Coronary Intervention
	Stats
N	65742
Mean (SD)	351.7 (1049.4)
Median (25th, 75th)	0.0 (0.0, 2.0)
Min, Max	0.0, 10308.0
Description	
Days from this catheterization to the first subsequent PCI. If the patient is never treated with PCI, then the value is set to missing. Event is censored in Dec2014. The subsequent procedure may not have been performed at Duke.	

FOLLOW-UP: ALL DAYS TO EVENT VARIABLES ARE CENSORED IN DEC2014

Variable Name (Type)	DSSTROKE (Numeric)
Label	Days to First Subsequent Non-Fatal Stroke
	Stats
N	17657
Mean (SD)	2093.6 (2133.9)
Median (25th, 75th)	1483.0 (221.0, 3318.0)
Min, Max	0.0, 10580.0
Description	
Days from this catheterization to the first subsequent stroke. If there is no evidence of a subsequent stroke, then the value is set to missing. Event is censored in Dec2014.	

Variable Name (Type)	DSVALVE (Numeric)
Label	Days to First Subsequent Valve Repair or Replacement Surgery
	Stats
N	8703
Mean (SD)	730.9 (1586.5)
Median (25th, 75th)	12.0 (3.0, 504.0)
Min, Max	0.0, 10413.0
Description	
Days from this catheterization to the first subsequent valve repair or replacement surgery. If the patient is never treated with valve repair or replacement, then the value is set to missing. Event is censored in Dec2014. The subsequent procedure may not have been performed at Duke.	

Variable Name (Type)		FUCOMP30D (Numeric)
Label		Follow-up is Complete at 30 days
Value	**Format**	**Stats**
0	No	2452 / 155980 (1.6%)
1	Yes	153528 / 155980 (98.4%)
Description		
This is Yes (1) if the patient died or was followed through 30 days post catheterization. If the patient was last known alive and the follow-up was less than 30 days, then the value is No (0)		

FOLLOW-UP: ALL DAYS TO EVENT VARIABLES ARE CENSORED IN DEC2014

Variable Name	(Type)	FUPROTCL (Numeric)
Label		Patient on Follow-up Protocol
Value	**Format**	**Stats**
0	No	36411 / 155980 (23.3%)
1	Yes	119569 / 155980 (76.7%)
Description		
Only a subset of the patients in this study were on a follow-up protocol. Follow-up protocol includes patient administered questionnaires, telephone contact and subsequent National Death Index submissions for non-responders. Follow-up protocol eligibility included all patients diagnosed at Duke with significant coronary disease or patients for whom follow-up was needed for other studies.		

Variable Name	(Type)	TRT30DAY (Numeric)
Label		Initial Treatment for Coronary Artery or Valvular Heart Disease within 30 days
Value	**Format**	**Stats**
0	Medical	83465 / 155980 (53.5%)
1	PCI	53416 / 155980 (34.2%)
2	CABG	13968 / 155980 (9.0%)
3	Valve repair/replacement only	2981 / 155980 (1.9%)
4	CABG and Valve repair/replacement	2150 / 155980 (1.4%)
Description		
Reflects the initial treatment decision following cardiac catheterization for the next 30 days. Intervention classification is the first attempted procedure during or post-catheterization. Medical treatment is assumed if no intervention is attempted within 30 days. Isolated valve surgeries outside of Duke are likely unavailable for this cohort since these patients are not likely to be on follow-up protocol.		