ICHOM

International Consortium for Health Outcomes Measurement

CORONARY ARTERY DISEASE DATA COLLECTION REFERENCE GUIDE

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CORONARY ARTERY DISEASE

We are thrilled that you are interested in measuring outcomes for your coronary artery disease patients according to ICHOM standards. It is our hope that this Reference Guide will facilitate the process of implementing our Standard Set and ensure collection of comparable data for global benchmarking and learning.

Introducing ICHOM and the Reference Guide

ICHOM brings together patient representatives, clinician leaders, and registry leaders from all over the world to develop Standard Sets, comprehensive yet parsimonious sets of outcomes and case-mix variables we recommend all providers track.

Each Standard Set focuses on patient-centered results, and provides an internationally-agreed upon method for measuring each of these outcomes. We do this because we believe that standardized outcomes measurement will open up new possibilities to compare performance globally, allow clinicians to learn from each other, and rapidly improve the care we provide our patients.

Our Standard Sets include initial conditions and risk factors to enable meaningful case-mix adjustment globally, ensuring that comparisons of outcomes will take into account the differences in patient populations across not just providers, but also countries and regions. We also include high-level treatment variables to allow stratification of outcomes by major treatment types. A comprehensive data dictionary is included in the appendix.

Working Group Members for Coronary Artery Disease

The following individuals dedicated both time and expertise to develop the ICHOM Standard Set for Coronary Artery Disease in partnership with ICHOM, under the leadership of Dr. Jack Lewin, Chief Executive Officer of the Cardiovascular Research Foundation in New York City.

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Conditions and Treatment Approaches Covered for Coronary Artery Disease

For Coronary Artery Disease, the following conditions and treatment approaches (or interventions) are covered by our Standard Set.

Conditions	Asymptomatic Coronary Artery Disease | Stable Angina | Acute Coronary Syndrome (Includes AMI)
Treatment Approaches	Lifestyle Modification | Drug Therapy | Percutaneous Coronary Intervention (PCI) | Coronary Artery Bypass Grafting (CABG)

ICHOM Standard Set for Coronary Artery Disease

Case-Mix Variables

Patient Population	Measure	Supporting Information	Timing	Data Source[1]
Demographic Factors				
All patients[1]	Age	Date of birth	At time of CAD diagnosis[2]	Patient-reported, clinical, or administrative data
	Sex	Sex at birth		
Baseline Health Status				
All patients	Previous AMI	N/A	At time of CAD diagnosis[2]	Clinical[3]
	Heart failure	N/A		
	Hypertension	N/A		
	Stroke	N/A		
	Diabetes	N/A		
	Insulin dependence	If patient has a confirmed history of diabetes		
	Peripheral arterial disease	N/A		
	Dialysis dependence	N/A		
	Baseline creatinine	N/A		
	Chronic lung disease	Oxygen dependency		
	Liver cirrhosis	N/A		
	Dementia	N/A		
	Body mass index	Height and weight	Index hospitalization	Clinical
ACS patient	Peak troponin elevation	Troponin T or I, peak level, lab's upper limit of normal		
	Presenting creatinine	Creatinine level		
	Presenting heart rate	First measurement or earliest record for episode of care		
	Presenting systolic blood pressure	First measurement or earliest record for episode of care		
	Type of AMI	NSTEMI or STEMI		
ACS patients PCI and CABG patients	Cardiogenic shock at first medical contact	N/A		
	Cardiac arrest	Episode of cardiac arrest		
	Status	Prior to entering operating room		
	Pre-procedural creatinine	Creatinine level		
	Left main disease	N/A		
	Number of major diseased vessels	LAD system, Circumflex system, and/or Right system with ≥50% narrowing of any vessel preoperatively		
Prior Treatments				
AMI patients PCI and CABG patients	Previous CABG	Date of previous CABG	Index hospitalization	Clinical
	Previous PCI	Date of previous PCI		

[1] All patients = Asymptomatic patients + Stable disease patients + ACS patients + PCI/CABG patients

[2] Initial CAD diagnosis might occur in an outpatient clinic (e.g. stable CAD or asymptomatic CAD) or in an episode of acute coronary syndrome

[3] Where possible, we also recommend the collection of comorbidities via administrative data to allow for comparisons in coverage and validity

ACS: Acute coronary syndrome; AMI: Acute myocardial infarction (heart attack); PCI: Percutaneous Coronary Intervention; CABG: Coronary Artery Bypass Grafting

Treatment Variables

Patient Population	Measure	Supporting Information	Timing	Data Source
Patients undergoing PCI	PCI procedure type	PCI or PCI + other	During index visit or hospitalization for procedure	Clinical
Patients undergoing cardiac surgery	Cardiac surgery procedure type	CABG, CABG + valve, and CABG + other		

Outcomes

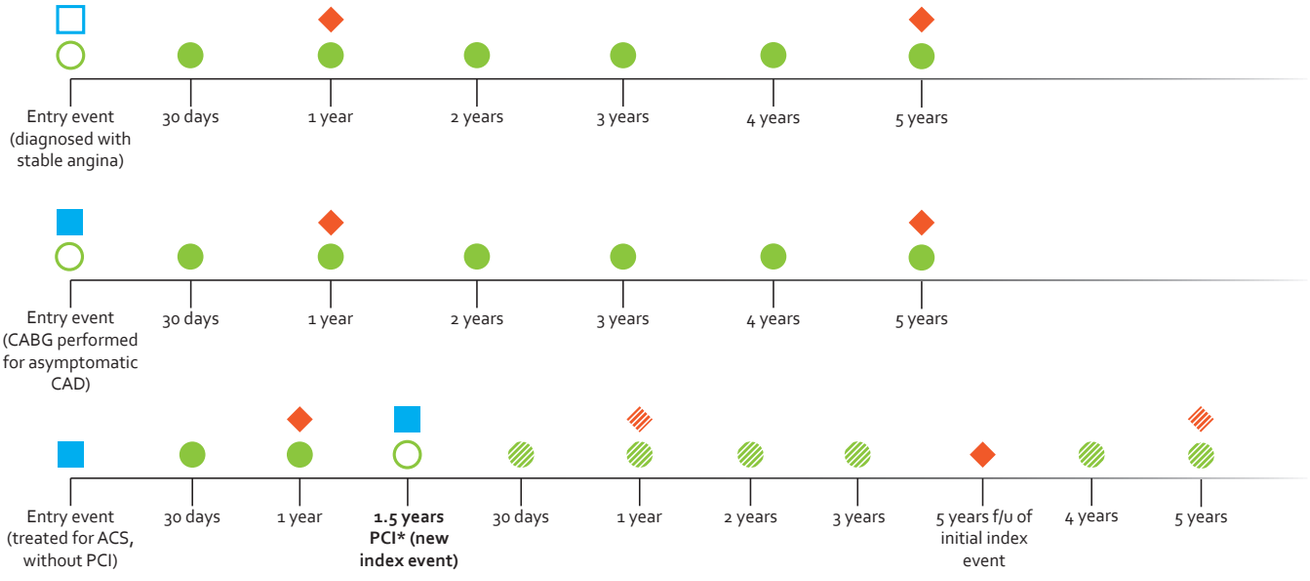
Patient Population	Measure	Supporting Information	Timing	Data Source
Acute Complications of Treatment				
PCI and CABG patients	Mortality post procedure	Date of death	Within 30 days of procedure[4]	Clinical or administrative
	Place of death	Home, acute care hospital or rehab, or nursing home or hospice		
	Stroke	Including type		
	Total length of stay	Date of admission and discharge	Within index hospitalization	Administrative
	Post-procedure length of stay	Date of intervention		
Major Surgery Complications				
CABG patients	Prolonged ventilation	N/A	Within index hospitalization	Clinical
	Deep sternal wound infection	Requiring operative intervention	Within 30 days of procedure[4]	
	Reoperation required	Date of reoperation		
Major Interventional Cardiology Complications				
PCI patients	Significant dissection	Type C through Type F	Within index hospitalization	Clinical
	Perforation	N/A		
	Emergent CABG for failed PCI	N/A		
	Vascular complications requiring intervention	N/A	Within 30 days of procedure[4]	
	Bleeding event within 72 hours	N/A	Within 72 hours of procedure[4]	
Patient-Reported Health Status				
All patients	Angina	Tracked via SAQ-7	Baseline; 30 days + annually up to 5 years after index event	Patient-reported
	Dyspnea	Tracked via Rose		
	Depression	Tracked via PHQ-2		
	Functional status	Tracked via SAQ-7		
	Health-related quality of life			
Cardiovascular Disease Progression				
All patients	Admissions (for AMI, hemorrhagic stroke, ischemic stroke, or heart failure)	Date of admission and discharge	Tracked ongoing; Reported at 1 year + 5 years after index event	Administrative
	Procedural interventions	Date and type of revascularization procedure (PCI or CABG)		
	Renal failure	Need for dialysis		
Survival				
All patients	All-cause mortality	Date of death	Tracked ongoing; Reported at 1 year + 5 years after index event	Administrative

[4] Given that some institutions are not able to track these complications outside the hospital, we recommend to record in-hospital occurrences and out-of-hospital occurrences separately

AMI: Acute myocardial infarction (heart attack); PCI: Percutaneous Coronary Intervention; CABG: Coronary Artery Bypass Grafting; SAQ-7: Seattle Angina Questionnaire; Rose: Rose dyspnea scale; PHQ-2: Patient Health Questionnaire

Follow-Up Timeline and Sample Questionnaires

The following timeline illustrates when Standard Set variables should be collected from patients, clinicians, and administrative sources. Links to the sample questionnaires may be found in the legend below.



* A new revascularization procedure or a new diagnosis of ACS constitutes a new index event, and tracking of patient-reported health status should reset from this point, tracking again at +30 days, and then annually for 5 years. Given that longitudinal data capture is based on administrative data, this can continue to be collected and analyzed for either the original or subsequent index events

The following questionnaires should be administered at the indicated time points

1. Baseline Patient-Reported Form (link)
2. Baseline Outpatient Clinical Form (link)
3. Peri-Interventional Clinical Form (link)
4. Follow-Up Patient-Reported Form (link)
5. Follow-Up Administrative Form (link)
6. Follow-Up Patient-Reported Form for new event (same as link #4)
7. Follow-Up Administrative Form for new event (same as link #5)

Collecting Patient-Reported Outcome Measures

Coronary Artery Disease Survey Used	Licensing Information	Scoring Guide
Seattle Angina Questionnaire (SAQ-7)	The SAQ-7 requires a license for use in clinical practice. For more information, please visit http://www.cvoutcomes.org	See link at left
Rose Dyspnea Scale	The Rose Dyspnea Scale is free for all health care organizations, and a license is not needed.	More information may be found at http://www.ahjonline.com/article/S0002-8703(09)00266-X/abstract
Patient Health Questionnaire (PHQ-2)	The PHQ-2 is free for all health care organizations, and a license is not needed.	The scoring guide may be found at http://www.phqscreeners.com/instructions/instructions.pdf

The Growing ICHOM Community

By implementing the ICHOM Standard Sets, you become part of an expanding, international community of innovative health care providers dedicated to improving value for patients. Already, more than 40 institutions from nearly 20 countries have begun measuring outcomes according to ICHOM standards. To learn more about how ICHOM can assist your organization in implementing outcome measurement, contact us at **implement@ichom.org**, or visit **http://www.ichom.org/measure**.

Appendix

Introduction to the Data Dictionary

This data dictionary is designed to help you measure the ICHOM Coronary Artery Disease Standard Set as consistently as possible to the Working Group recommendation. ICHOM is actively preparing for benchmarking efforts based on this data, and all data submitted for comparisons will need to be transformed into the following data structure if not already structured as such. **We are happy to provide an Excel version of this data dictionary for technical use.**

Please timestamp all variables. Some Standard Set variables are collected at multiple timepoints, and we will ask you to submit these variables in a concatenated VARIABLEID_TIMESTAMP form for future analyses. For example, VARIABLEID_BASE (baseline); VARIABLEID_6MO (6 month follow-up); VARIABLEID_1YR (1 year follow-up), etc.

Case-Mix Variables

Variable ID:	N/A
Variable:	Patient ID
Definition:	Indicate the patient's medical record number
Supporting Definition:	This number will not be shared with ICHOM. In the case patient-level data is submitted to ICHOM for benchmarking or research purposes, a separate ICHOM Patient Identifier will be created and cross-linking between the ICHOM Patient Identifier and the medical record number will only be known at the treating institution
Inclusion Criteria:	All patients
Timing:	On all forms
Data Source:	Administrative or clinical
Type:	Numerical
Response Options:	According to institution

Demographic Factors

Variable ID:	AGE
Variable:	Age
Definition:	What is your date of birth?
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Patient-reported, clinical, or administrative data
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY

Variable ID:	SEX
Variable:	Sex
Definition:	Please indicate your sex at birth
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Patient-reported, clinical, or administrative data
Type:	Single answer
Response Options:	1 = Male 2 = Female

Baseline Health Status

Variable ID:	PREVAMI
Variable:	Past medical history: Previous AMI
Definition:	Indicate if the patient has had at least one documented previous myocardial infarction at any point in their history
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	HF
Variable:	Past medical history: Heart failure
Definition:	Indicate if the patient has a documented history of heart failure
Supporting Definition:	Heart failure 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
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	HYPERTEN
Variable:	Past medical history: Hypertension
Definition:	Indicate whether the patient has a documented history of hypertension diagnosed and treated with medication and/or diet and/or exercise
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	STROKE
Variable:	Past medical history: Stroke
Definition:	Indicate whether the patient has a documented history of stroke
Supporting Definition:	Stroke is defined as any confirmed neurological deficit of abrupt onset caused by a disturbance in blood supply to the brain that did not resolve within 24 hours
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	DIAB
Variable:	Past medical history: Diabetes
Definition:	Indicate if the patient has a documented history of diabetes mellitus (regardless of duration of disease or need for anti-diabetic agents)
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*

Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	INSULIN
Variable:	Past medical history: Insulin dependent
Definition:	Indicate if the patient is insulin dependent
Supporting Definition:	N/A
Inclusion Criteria:	All patients If answered 'yes' to patient having a documented history of diabetes mellitus (DIAB)
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	PERARTDIS
Variable:	Past medical history: Peripheral arterial disease
Definition:	Indicate whether the patient has a history of peripheral arterial disease
Supporting Definition:	Includes upper and lower extremity, renal, mesenteric, and abdominal aortic systems evidenced by a documented history of 1. Peripheral arterial disease and/or 2. Claudication, either with exertion or at rest, and/or 3. Amputation for arterial vascular insufficiency, and/or 4. Vascular reconstruction, bypass surgery, or percutaneous intervention to the extremities (excluding dialysis fistulas and vein stripping), and/or 5. Documented aortic aneurysm with or without repair. Peripheral arterial disease excludes disease in the carotid or cerebrovascular arteries
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	DIALYSIS
Variable:	Past medical history: Dialysis dependent
Definition:	Indicate whether the patient is dialysis dependent
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	BASECREAT
Variable:	Laboratory values: Baseline creatinine level
Definition:	Indicate the patient's baseline creatinine level
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical
Type:	Numerical value
Response Options:	Absolute numerical value of baseline creatinine level (include units)
Variable ID:	BASECREATUNIT
Variable:	Laboratory values: Baseline creatinine units
Definition:	Indicate units of baseline creatinine level
Supporting Definition:	N/A

Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = µmol/l
	2 = mg/dl
Variable ID:	CHRONLD
Variable:	Past medical history: Chronic lung disease
Definition:	Indicate whether the patient has a chronic lung disease
Supporting Definition:	Including but not limited to COPD and asthma
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No
	1 = Yes
Variable ID:	OXYDEPEN
Variable:	Past medical history: Oxygen dependent
Definition:	Indicate if the patient is oxygen dependent
Supporting Definition:	N/A
Inclusion Criteria:	All patients
	If answered 'yes' to patient having a chronic lung disease (CHRONLD)
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No
	1 = Yes
Variable ID:	LIVER
Variable:	Past medical history: Cirrhosis
Definition:	Indicate whether the patient has a history of cirrhosis
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No
	1 = Yes
Variable ID:	DEMEN
Variable:	Past medical history: Dementia
Definition:	Indicate whether the patient has a history of dementia
Supporting Definition:	Including but not limited to, Alzheimer's disease, vascular dementia, lewy body dementia and frontotemporal dementia
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical*
Type:	Single answer
Response Options:	0 = No
	1 = Yes
Variable ID:	HEIGHT
Variable:	Height
Definition:	Indicate the patient's height
Supporting Definition:	Height and weight are used to calculate BMI
Inclusion Criteria:	All patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Numerical value
Response Options:	Numerical value of height in centimeters or inches

Variable ID:	HEIGHTUNIT
Variable:	Height units
Definition:	Indicate units of height
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = centimeters 2 = inches
Variable ID:	WEIGHT
Variable:	Weight
Definition:	Indicate the patient's weight
Supporting Definition:	Height and weight are used to calculate BMI
Inclusion Criteria:	All patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Numerical value
Response Options:	Numerical value of weight in kilograms or pounds
Variable ID:	WEIGHTUNIT
Variable:	Weight units
Definition:	Indicate units of weight
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = kilograms 2 = pounds
Variable ID:	PTE_Q01
Variable:	Question 1 of peak troponin elevation (Troponin type)
Definition:	Indicate whether troponin T or I
Supporting Definition:	N/A
Inclusion Criteria:	ACS patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = Troponin T 2 = Troponin I
Variable ID:	PTE_Q02
Variable:	Question 2 of peak troponin elevation (Absolute value)
Definition:	Indicate the peak level reached
Supporting Definition:	N/A
Inclusion Criteria:	ACS patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Numerical value
Response Options:	Numerical value of peak level
Variable ID:	PTE_Q03
Variable:	Question 3 of peak troponin elevation (Lab's upper limit of normal)
Definition:	Give the lab's upper limit of normal
Supporting Definition:	N/A
Inclusion Criteria:	ACS patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Numerical value
Response Options:	Numerical value of upper limit of normal

Variable ID:	HEARTRAT
Variable:	Physiologic variables at first medical contact: Heart rate
Definition:	Indicate the first measurement or earliest record of heart rate (in beats per minute) for this episode of care
Supporting Definition:	Measurement from the transferring facility is acceptable
Inclusion Criteria:	ACS patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Numerical value
Response Options:	Numerical value of heart rate in beats per minute
Variable ID:	SYSBLO
Variable:	Physiologic variables at first medical contact: Systolic blood pressure
Definition:	Indicate the first measurement or earliest record of systolic blood pressure (mm Hg) for this episode of care
Supporting Definition:	Measurement from the transferring facility is acceptable
Inclusion Criteria:	ACS patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Numerical value
Response Options:	Numerical value of systolic blood pressure in mm Hg
Variable ID:	AMITYP
Variable:	Discharge diagnosis
Definition:	Indicate whether the patient has a documented discharge diagnosis of NSTEMI or STEMI
Supporting Definition:	N/A
Inclusion Criteria:	ACS patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = NSTEMI 2 = STEMI
Variable ID:	CARDSHOC
Variable:	Cardiogenic shock at first medical contact
Definition:	Indicate whether the patient has had an episode of cardiogenic shock at first medical contact
Supporting Definition:	Cardiogenic shock is defined as a sustained (>30 minutes) episode of systolic blood pressure <90 mm Hg, and/or cardiac index, 2.2 L/min/m2 determined to be secondary to cardiac dysfunction, and/or the requirement for parenteral inotropic or vasopressor agents or mechanical support (e.g., IABP, extracorporeal circulation, ventricular assist devices) to maintain blood pressure and cardiac index above those specified levels. Note: Transient episodes of hypotension reversed with IV fluid or atropine do not constitute cardiogenic shock. The hemodynamic compromise (with or without extraordinary supportive therapy) must persist for at least 30 minutes
Inclusion Criteria:	ACS patients, PCI and CABG patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	CARDARRE
Variable:	Cardiac arrest
Definition:	Indicate if the patient has had an episode of cardiac arrest evaluated by pre-hospital emergency services or emergency department personnel
Supporting Definition:	Cardiac arrest means the patient either 1. received attempts at external defibrillation (by lay responders or emergency personnel) or chest compressions by organized pre-hospital emergency services or

	emergency department personnel or 2. was pulseless but did not receive attempts to defibrillate or cardiopulmonary resuscitation (CPR) by emergency personnel. 'Sudden' cardiac arrest is the sudden cessation of cardiac activity so that the victim becomes unresponsive, with no normal breathing and no signs of circulation. If corrective measures are not taken rapidly, this condition progresses to sudden death. Cardiac arrest should be used to signify an event as described above that is reversed, usually by CPR, and/or defibrillation or cardioversion, or cardiac pacing. Sudden cardiac arrest is not the same as sudden cardiac death. Sudden cardiac death describes a fatal event
Inclusion Criteria:	ACS patients, PCI and CABG patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	PRECREAT
Variable:	Laboratory values: Presenting creatinine units
Definition:	Indicate units of presenting creatinine level
Supporting Definition:	N/A
Inclusion Criteria:	ACS patients, PCI and CABG patients
Timing:	At time of diagnosis
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = µmol/l 2 = mg/dl
Variable ID:	PRECREATUNIT
Variable:	Laboratory values: Presenting creatinine units
Definition:	Indicate units of presenting creatinine level
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	At time of diagnosis
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = µmol/l 2 = mg/dl
Variable ID:	STATUSCABG
Variable:	Clinical status of the patient prior to entering the operating room (CABG status)
Definition:	Indicate the clinical status of the patient prior to entering the operating room
Supporting Definition:	Elective: The patient's cardiac function has been stable in the days or weeks prior to the operation. The procedure could be deferred without increased risk of compromised cardiac outcome Urgent: Procedure required during same hospitalization in order to minimize chance of further clinical deterioration. Examples include but are not limited to: Worsening chest pain, sudden chest pain, CHF, acute myocardial infarction (AMI), anatomy, IABP, unstable angina (USA) with intravenous (IV) nitroglycerin (NTG) or rest angina Emergent: Patients requiring emergency operations will have ongoing, refractory (difficult, complicated, and/or unmanageable) unrelenting cardiac compromise, with or without hemodynamic instability, and not responsive to any form of therapy except cardiac surgery. An emergency operation is one in which there should be no delay in providing operative intervention Emergent Salvage: The patient is undergoing CPR en route to the operating room or prior to anesthesia induction or has ongoing ECMO to maintain life
Inclusion Criteria:	CABG patients only
Timing:	Index hospitalization
Data Source:	Clinical

Type:	Single answer
Response Options:	1 = Elective 2 = Urgent 3 = Emergent 4 = Emergent Salvage
Variable ID:	STATUSPCI
Variable:	PCI status
Definition:	Indicate the clinical status of the patient prior to entering the operating room
Supporting Definition:	Elective: The patient's cardiac function has been stable in the days or weeks prior to the operation. The procedure could be deferred without increased risk of compromised cardiac outcome Not elective: Urgent, emergent, or emergent salvage (see above)
Inclusion Criteria:	PCI patients only
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = Elective 2 = Not elective
Variable ID:	LMDIS
Variable:	Left Main Coronary Disease
Definition:	Indicate whether the patient has Left Main Coronary Disease
Supporting Definition:	Left Main Coronary Disease is present when there is ≥50% compromise of vessel diameter or 30%-50% with an FFR <0.75 or a minimum lumen area <6mm2 or a minimum lumen diameter <2.8mm
Inclusion Criteria:	PCI and CABG patients only
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	DISVES
Variable:	Number of major diseased vessels
Definition:	Indicate the number of diseased major native coronary vessel systems: LAD system, Circumflex system, and/or Right system with ≥50% narrowing of any vessel preoperatively
Supporting Definition:	Left main disease (≥50%) is counted as TWO vessels (LAD and Circumflex, which may include a Ramus Intermedius). For example, left main and RCA would count as three total
Inclusion Criteria:	PCI and CABG patients only
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Numerical value
Response Options:	Numerical value of diseased vessels
Variable ID:	PROCREAT
Variable:	Laboratory values: Pre-procedural creatinine
Definition:	Indicate the patient's pre-procedural creatinine level
Supporting Definition:	N/A
Inclusion Criteria:	PCI and CABG patients only
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Numerical value
Response Options:	Absolute numerical value of pre-procedural creatinine level in mg/dl
Variable ID:	PROCREATUNIT
Variable:	Laboratory values: Pre-procedural creatinine
Definition:	Indicate the patient's pre-procedural creatinine level
Supporting Definition:	N/A
Inclusion Criteria:	PCI and CABG patients only

Timing:	Index hospitalization
Data Source:	Clinical
Type:	Numerical value
Response Options:	Absolute numerical value of pre-procedural creatinine level in mg/dl

Prior Treatments

Variable ID:	PRIOCABG
Variable:	Previous revascularization procedures: Previous CABG
Definition:	Indicate if the patient has had a previous CABG
Supporting Definition:	Includes CABG + other heart surgery e.g. CABG + Valve
Inclusion Criteria:	ACS patients, PCI and CABG patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	PRIOCABGDATE
Variable:	Date of previous CABG
Definition:	Indicate date of CABG
Supporting Definition:	N/A
Inclusion Criteria:	ACS patients, PCI and CABG patients If answered 'yes' to patient having a previous CABG (CABG)
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY
Variable ID:	PRIOPCI
Variable:	Previous revascularization procedures: Previous PCI
Definition:	Indicate if the patient had a previous percutaneous coronary intervention (PCI) of any type (balloon angioplasty, stent or other)
Supporting Definition:	A 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
Inclusion Criteria:	ACS patients, PCI and CABG patients
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	PRIOPCIDATE
Variable:	Date of previous PCI
Definition:	Indicate date of PCI
Supporting Definition:	N/A
Inclusion Criteria:	ACS patients, PCI and CABG patients If answered 'yes' to patient having a previous PCI (PCI)
Timing:	Index hospitalization
Data Source:	Clinical
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY

*** Where possible, we also recommend the collection of comorbidities via administrative data to allow for comparisons in coverage and validity**

Treatment Variables

Variable ID:	PCIPROCEDURETYPE
Variable:	PCI procedure type
Definition:	Indicate the PCI procedure type
Supporting Definition:	PCI + other includes but is not limited to: right heart caths, EtOH ablations, septal closures, and other angiograms and/or endovascular interventions
Inclusion Criteria:	Patients receiving percutaneous coronary interventions
Timing:	During index visit or hospitalization for procedure
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = PCI only 2 = PCI + other
Variable ID:	CABGPROCEDURETYPE
Variable:	Cardiac surgery procedure type
Definition:	Indicate the cardiac surgery procedure type
Supporting Definition:	CABG + other includes but is not limited to: placement of ventricular assist devices, non-cardiac procedures
Inclusion Criteria:	Patients receiving cardiac surgery
Timing:	During index visit or hospitalization for procedure
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = CABG only 2 = CABG + valve 3 = CABG + other
Variable ID:	EPISODETYPE
Variable:	Episode type
Definition:	Indicate the episode type
Supporting Definition:	N/A
Inclusion Criteria:	All patients undergoing interventional treatment for coronary disease
Timing:	During index visit or hospitalization for procedure
Data Source:	Clinical
Type:	Single answer
Response Options:	1 = Acute myocardial infarction, without PCI or CABG 2 = PCI, with or without acute myocardial infarction 3 = CABG, with or without acute myocardial infarction

Acute Complications of Treatment

Variable ID:	DEATH
Variable:	Patient died, regardless of cause
Definition:	Indicate if the patient has died, regardless of cause
Supporting Definition:	Any death, regardless of cause occurring (1) within 30 days after surgery in or out of the hospital, and (2) after 30 days during the same hospitalization subsequent to the operation
Inclusion Criteria:	PCI and CABG patients
Timing:	Within 30 days of procedure
Data Source:	Clinical or administrative data
Type:	Single answer
Response Options:	0 = No 1 = Yes, during index hospitalization 2 = Yes, after discharge but within 30 days of procedure
Variable ID:	DEATHDATE
Variable:	Date of death
Definition:	Indicate the date the patient was declared dead
Supporting Definition:	N/A
Inclusion Criteria:	PCI and CABG patients If answered 'yes' that patient has died (DEATH)
Timing:	Within 30 days of procedure
Data Source:	Clinical or administrative data
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY
Variable ID:	DEATHPLACE
Variable:	Location of death (if patient died after discharge)
Definition:	Indicate where the patient died
Supporting Definition:	N/A
Inclusion Criteria:	PCI and CABG patients If answered 'yes' that patient has died (DEATH)
Timing:	Within 30 days of procedure
Data Source:	Clinical or administrative data
Type:	Single answer
Response Options:	1 = Home 2 = Acute care hospital or rehab 3 = Nursing home or hospice 888 = Other
Variable ID:	STROKECOMP
Variable:	Stroke
Definition:	Indicate whether the patient had a stroke
Supporting Definition:	Stroke is defined as any confirmed neurological deficit of abrupt onset caused by a disturbance in blood supply to the brain that did not resolve within 24 hours
Inclusion Criteria:	PCI and CABG patients
Timing:	Within 30 days of procedure
Data Source:	Clinical or administrative data
Type:	Single answer
Response Options:	0 = No 1 = Yes, during index hospitalization 2 = Yes, after discharge but within 30 days of procedure
Variable ID:	STROKECOMPTYP
Variable:	Type of stroke (if stroke occurred)
Definition:	Indicate type of stroke if documented on imaging, or via lumbar puncture, neurosurgery, or autopsy
Supporting Definition:	N/A

Inclusion Criteria:	PCI and CABG patients If answered 'yes' that patient had a stroke (STROKE)
Timing:	Within 30 days of procedure
Data Source:	Clinical or administrative data
Type:	Single answer
Response Options:	1 = Ischemic 2 = Hemorrhagic 999 = Unknown
Variable ID:	ARENFAI
Variable:	Acute renal failure
Definition:	Indicate whether the patient has a diagnosis of acute renal failure
Supporting Definition:	Acute renal failure is the documented history of AKI and/or Increase in serum creatinine by ≥ 0.3 mg/dl (≥ 26.5 l mol/l) within 48 hours; and/or increase in serum creatinine to ≥ 1.5 times baseline, which is known or presumed to have occurred within the prior 7 days; and/or urine volume < 0.5 ml/kg/h for 6 hours; and/or new requirement for dialysis
Inclusion Criteria:	PCI and CABG patients
Timing:	Within 30 days of procedure
Data Source:	Clinical or administrative data
Type:	Single answer
Response Options:	0 = No 1 = Yes, during index hospitalization 2 = Yes, after discharge but within 30 days of procedure
Variable ID:	ARIDATE
Variable:	Date of arrival
Definition:	Indicate the date the patient first arrived
Supporting Definition:	Date used to calculate total length of stay and post-procedure length of stay
Inclusion Criteria:	PCI and CABG patients
Timing:	Within 30 days of procedure
Data Source:	Clinical or administrative data
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY at arrival
Variable ID:	DISDATE
Variable:	Date of discharge
Definition:	Indicate the date the patient was discharged
Supporting Definition:	Date used to calculate total length of stay
Inclusion Criteria:	PCI and CABG patients
Timing:	Within index hospitalization
Data Source:	Administrative data
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY at discharge
Variable ID:	PRODATE
Variable:	Date of procedure
Definition:	Indicate the date of intervention
Supporting Definition:	Date used to calculate post-procedure length of stay
Inclusion Criteria:	PCI and CABG patients
Timing:	Within index hospitalization
Data Source:	Administrative data
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY at intervention

Major Surgery Complications

Variable ID:	PROVENT
Variable:	Prolonged ventilation
Definition:	Indicate whether the patient had prolonged pulmonary ventilator >24 hours after CABG
Supporting Definition:	Includes (but not limited to) causes such as ARDS, pulmonary edema, and/or any

	patient requiring mechanical ventilation > 24 hours postoperatively
Inclusion Criteria:	CABG patients
Timing:	Within index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes, during index hospitalization 2 = Yes, after discharge but within 30 days of procedure
Variable ID:	STERWINF
Variable:	Deep sternal wound infection
Definition:	Indicate whether the patient had a deep sternal infection involving muscle, bone, and/or mediastinum REQUIRING OPERATIVE INTERVENTION
Supporting Definition:	Must have ALL of the following conditions: 1. Wound opened with excision of tissue (I&D) or re-exploration of mediastinum 2. Positive culture unless patient on antibiotics at time of culture or no culture obtained 3. Treatment with antibiotics beyond perioperative prophylaxis
Inclusion Criteria:	CABG patients
Timing:	Within 30 days of procedure
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes, during index hospitalization 2 = Yes, after discharge but within 30 days of procedure
Variable ID:	REOPREQ
Variable:	Reoperation required
Definition:	Indicate if the patient required a return to the operating room for bleeding with or without tamponade, graft occlusion, valve dysfunction, or other cardiac reason
Supporting Definition:	N/A
Inclusion Criteria:	CABG patients
Timing:	Within 30 days of procedure
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes, during index hospitalization 2 = Yes, after discharge but within 30 days of procedure

Major Interventional Cardiology Complications

Variable ID:	SIGDIS
Variable:	Intraoperative complications: Significant dissection
Definition:	Indicate if a significant dissection was observed at the time of PCI
Supporting Definition:	Typically, dissections described as type A or B are not considered significant dissections because there is no impairment of flow. Significant dissections are grade C dissections in the presence of ischemia, or grade D-F dissections, all of which are further described as: Type C: persisting contrast medium extravasations; Type D: spital filling defect with delayed but complete distal flow; Type E: persistent filling defect with delayed antegrade flow; Type F: filling defect with impaired flow and total occlusion
Inclusion Criteria:	PCI patients
Timing:	Within index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	PERF
Variable:	Intraoperative complications: Perforation

Definition:	Indicate if angiographic or clinical evidence of perforation was observed at the time of the PCI procedure
Supporting Definition:	A coronary artery perforation occurs when there is angiographic or clinical evidence of a dissection or intimal tear that extends through the full thickness of the arterial wall
Inclusion Criteria:	PCI patients
Timing:	Within index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	EMERCABG
Variable:	Intraoperative complications: Emergent CABG for failed PCI
Definition:	Indicate the occurrence of any emergency cardiothoracic surgical procedure (whether or not this actually involves the placing of bypass grafts)
Supporting Definition:	The surgery should be: a. Cardio-thoracic (rather than for peripheral vascular complications at access sites) b. Prompted and indicated by a need to - Perform emergency revascularization to a coronary distribution that has been the subject of a PCI or attempted PCI and/or - To correct as an emergency a complication of PCI such as abrupt vessel closure, cardiac or vessel perforation, dissection of a thoracic great vessel etc.
Inclusion Criteria:	PCI patients
Timing:	Within index hospitalization
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	VASCOMP
Variable:	In-hospital and out-of-hospital complications: Vascular complications requiring intervention
Definition:	Indicate if the patient experienced any non-cardiac vascular complications (excluding external bleeding or hematomas) at the percutaneous entry site that required treatment or intervention
Supporting Definition:	Vascular complications can include, but are not limited to, access site occlusions, peripheral embolizations, dissections, pseudoaneurysms and/or AV fistulas. Any noted vascular complication must have had an intervention such as a fibrin injection, angioplasty, or surgical repair to qualify. Prolonged pressure does not qualify as an intervention, but ultrasonic guided compression after making a diagnosis of pseudoaneurysm does qualify. A retroperitoneal bleed or hematoma requiring transfusion is not a vascular complication under this data element. To qualify, this adverse outcome should be attributable to this procedure and not related to a previous or subsequent procedure
Inclusion Criteria:	PCI patients
Timing:	Within 30 days of procedure
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes, during index hospitalization 2 = Yes, after discharge but within 30 days of procedure
Variable ID:	BLEEDING
Variable:	In-hospital and out-of-hospital complications: Bleeding event within 72 hours
Definition:	Indicate if the patient experienced a suspected or confirmed bleeding event
Supporting Definition:	A bleeding event is observed and documented in the medical record that was associated with any of the following: 1. Hemoglobin drop of ≥3 g/dl;

	2. Transfusion of whole blood or packed red blood cells; 3. Procedural intervention/surgery at the bleeding site to reverse/stop or correct the bleeding (such as surgical closures/exploration of the arteriotomy site, balloon angioplasty to seal an arterial tear, endoscopy with cautery of a GI bleed)
Inclusion Criteria:	PCI patients
Timing:	Within 72 hours of procedure
Data Source:	Clinical
Type:	Single answer
Response Options:	0 = No 1 = Yes, during index hospitalization 2 = Yes, after discharge but within 72 hours of procedure

Patient-Reported Health Status

Variable ID:	SAQ7_Q01a
Variable:	Question 1a of SAQ-7
Definition:	The following is a list of activities that people often do during the week. Although for some people with several medical problems it is difficult to determine what it is that limits them, please go over the activities listed below and indicate how much limitation you have had due to chest pain, chest tightness or angina over the past 4 weeks. a: Walking indoors on level ground
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	1 = Extremely limited 2 = Quite a bit limited 3 = Moderately limited 4 = Slightly limited 5 = Not at all limited 6 = Limited for other reasons or did not do the activity
Variable ID:	SAQ7_Q01b
Variable:	Question 1b of SAQ-7
Definition:	b. Gardening, vacuuming or carrying groceries
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	1 = Extremely limited 2 = Quite a bit limited 3 = Moderately limited 4 = Slightly limited 5 = Not at all limited 6 = Limited for other reasons or did not do the activity
Variable ID:	SAQ7_Q01c
Variable:	Question 1c of SAQ-7
Definition:	c. Lifting or moving heavy objects (For example furniture, children)
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer

Response Options:	1 = Extremely limited 2 = Quite a bit limited 3 = Moderately limited 4 = Slightly limited 5 = Not at all limited 6 = Limited for other reasons or did not do the activity
Variable ID:	SAQ7_Q02
Variable:	Question 2 of SAQ-7
Definition:	Over the past 4 weeks, on average, how many times have you had chest pain, chest tightness or angina? I have had chest pain, chest tightness or angina…
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	1 = 4 or more times per day 2 = 1-3 times per day 3 = 3 or more times per week but not every day 4 = 1-2 times per week 5 = Less than once a week 6 = None over the past 4 weeks
Variable ID:	SAQ7_Q03
Variable:	Question 3 of SAQ-7
Definition:	Over the past 4 weeks, on average, how many times have you had to take nitroglycerin (nitroglycerin tablets or spray) for your chest pain, chest tightness or angina? I have taken nitroglycerin…
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	1 = 4 or more times per day 2 = 1-3 times per day 3 = 3 or more times per week but not every day 4 = 1-2 times per week 5 = Less than once a week 6 = None over the past 4 weeks
Variable ID:	SAQ7_Q04
Variable:	Question 4 of SAQ-7
Definition:	Over the past 4 weeks, how much has your chest pain, chest tightness or angina limited your enjoyment of life?
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	1 = It has extremely limited my enjoyment of life 2 = It has limited my enjoyment of life quite a bit 3 = It has moderately limited my enjoyment of life 4 = It has slightly limited my enjoyment of life 5 = It has not limited my enjoyment of life at all
Variable ID:	SAQ7_Q05

Variable:	Question 5 of SAQ-7
Definition:	If you had to spend the rest of your life with your chest pain, chest tightness or angina the way it is right now, how would you feel about this?
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	1 = Not satisfied at all 2 = Mostly dissatisfied 3 = Somewhat satisfied 4 = Mostly satisfied 5 = Completely satisfied
Variable ID:	RD_Q01
Variable:	Question 1 of Rose Dyspnea
Definition:	Do you get out of breath in the following situations? When hurrying on ground level or walking up a slight hill
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	RD_Q02
Variable:	Question 2 of Rose Dyspnea
Definition:	When walking with other people your age on level ground
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	RD_Q03
Variable:	Question 3 of Rose Dyspnea
Definition:	When walking your own pace on level ground
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	RD_Q04
Variable:	Question 4 of Rose Dyspnea
Definition:	When washing or dressing
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer

Response Options:	0 = No 1 = Yes
Variable ID:	PHQ2_Q01
Variable:	Question 1 of PHQ-2
Definition:	Over the past 2 weeks, how often have you been bothered by any of the following problems? Little interest or pleasure in doing things
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	1 = Not at all 2 = Several days 3 = More than half the days 4 = Nearly every day
Variable ID:	PHQ2_Q02
Variable:	Question 2 of PHQ-2
Definition:	Feeling down, depressed or hopeless
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Baseline 30 days + annually up to 5 years after index event
Data Source:	Patient-reported
Type:	Single answer
Response Options:	1 = Not at all 2 = Several days 3 = More than half the days 4 = Nearly every day

Cardiovascular Disease Progression

Variable ID:	AMI
Variable:	Acute myocardial infarction (AMI)
Definition:	Indicate if the patient was admitted due to an AMI
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	AMIARVDATE
Variable:	Admission for acute myocardial infarction (AMI)
Definition:	Indicate the date of each admission for AMI during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to AMI
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for an AMI (AMI)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each admission
Variable ID:	AMIDISDATE
Variable:	Discharge for acute myocardial infarction (AMI)

Definition:	Indicate the date of each discharge for AMI during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to AMI
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for an AMI (AMI)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each discharge
Variable ID:	HSTROKE
Variable:	Stroke: Hemorrhagic
Definition:	Indicate if the patient was admitted due to a hemorrhagic stoke
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	HSTROKEARVDATE
Variable:	Admission for hemorrhagic stroke
Definition:	Indicate the date of each admission for hemorrhagic stroke during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to hemorrhagic stroke
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for a hemorrhagic stroke (HSTROKE)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each admission
Variable ID:	HSTROKEDISDATE
Variable:	Discharge for hemorrhagic stroke
Definition:	Indicate the date of each discharge for hemorrhagic stroke during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to hemorrhagic stroke
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for a hemorrhagic stroke (HSTROKE)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each discharge
Variable ID:	ISTROKE
Variable:	Stroke: Ischemic
Definition:	Indicate if the patient was admitted due to an ischemic stoke
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)

Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	ISTROKEARVDATE
Variable:	Admission for ischemic stroke
Definition:	Indicate the date of each admission for ischemic stroke during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to ischemic stroke
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for an ischemic stroke (ISTROKE)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each admission
Variable ID:	ISTROKEDISDATE
Variable:	Discharge for ischemic stroke
Definition:	Indicate the date of each discharge for ischemic stroke during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to ischemic stroke
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for an ischemic stroke (ISTROKE)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each discharge
Variable ID:	USTROKE
Variable:	Stroke: Unknown
Definition:	Indicate if the patient was admitted due to an unknown stoke
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	USTROKEARVDATE
Variable:	Admission for unknown stroke
Definition:	Indicate the date of each admission for unknown stroke during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to unknown stroke
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for an unknown stroke (USTROKE)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each admission
Variable ID:	USTROKEDISDATE
Variable:	Discharge for unknown stroke
Definition:	Indicate the date of each discharge for unknown stroke during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to unknown stroke
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for an unknown stroke (USTROKE)
Timing:	Tracked ongoing

	Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each discharge
Variable ID:	HF
Variable:	Heart failure
Definition:	Indicate if the patient was admitted due to heart failure
Supporting Definition:	Heart failure 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
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	HFARVDATE
Variable:	Admission for heart failure
Definition:	Indicate the date of each admission for heart failure during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to heart failure
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for heart failure (HF)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each admission
Variable ID:	HFDISDATE
Variable:	Discharge for heart failure
Definition:	Indicate the date of each discharge for heart failure during the defined interval
Supporting Definition:	Date used to calculate total length of stay due to heart failure
Inclusion Criteria:	All patients If answered 'yes' to the patient being admitted for heart failure (HF)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY In the case of multiple dates, separate entries with ";"
Response Options:	DD/MM/YYYY of each discharge
Variable ID:	REVASPROPCI
Variable:	Previous revascularization procedures: PCI
Definition:	Indicate if a PCI was performed
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Multiple answer
Response Options:	0 = No additional procedure 1 = PCI

Variable ID:	REVASPCIDATE1
Variable:	Date of intervention #1
Definition:	Indicate the date of the PCI
Supporting Definition:	Restricted to PCI, CABG
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY
Variable ID:	REVASPCIDATE2
Variable:	Date of intervention #2
Definition:	Indicate the date of the PCI
Supporting Definition:	Restricted to PCI, CABG
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY
Variable ID:	REVASPROCABG
Variable:	Previous revascularization procedures: CABG
Definition:	Indicate if a CABG was performed
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Multiple answer
Response Options:	0 = No additional procedure 1 = CABG
Variable ID:	REVASCABGDATE1
Variable:	Date of intervention #1
Definition:	Indicate the date of the CABG
Supporting Definition:	Restricted to PCI, CABG
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY
Variable ID:	REVASCABGDATE2
Variable:	Date of intervention #2
Definition:	Indicate the date of the CABG
Supporting Definition:	Restricted to PCI, CABG
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (diagnosis coding)
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY
Variable ID:	DIALREQ
Variable:	New requirement for dialysis
Definition:	Indicate if the patient has a new requirement for dialysis
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Tracked ongoing

	Reported at 1 year + 5 years after index event
Data Source:	Administrative data (procedural coding)
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	DIALREQDATE
Variable:	Date of documented first dialysis
Definition:	Indicate the date the patient first began dialysis treatment
Supporting Definition:	N/A
Inclusion Criteria:	All patients If answered 'yes' that the began dialysis treatment
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (procedural coding)
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY

Survival

Variable ID:	DEATHADMIN
Variable:	Death: Patient died, regardless of cause
Definition:	Indicate if the patient has died, regardless of cause
Supporting Definition:	N/A
Inclusion Criteria:	All patients
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (death registers)
Type:	Single answer
Response Options:	0 = No 1 = Yes
Variable ID:	DEATHDATEDAMIN
Variable:	Death: Date of death
Definition:	Indicate the date the patient was declared dead
Supporting Definition:	N/A
Inclusion Criteria:	All patients If answered 'yes' on Mortality: Patient died regardless of cause (DEATHADMIN)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (death registers)
Type:	Date by DD/MM/YYYY
Response Options:	DD/MM/YYYY
Variable ID:	DEATHPLACEADMIN
Variable:	Death: Location of death (from death certificate)
Definition:	Indicate where the patient died
Supporting Definition:	N/A
Inclusion Criteria:	All patients If answered 'yes' on Mortality: Patient died regardless of cause (DEATHADMIN)
Timing:	Tracked ongoing Reported at 1 year + 5 years after index event
Data Source:	Administrative data (death registers)
Type:	Single answer
Response Options:	1 = Home 2 = Acute care hospital or rehab 3 = Nursing home or hospice 888 = Other

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Reference Guide Revisions

Reference Guide Version	Location within Reference Guide	Content Change
2.0.1	Introduction to the Data Dictionary	Modifications to introductory paragraph
2.0.1	Follow-Up Timeline and Sample Questionnaires	Dinstiguished points of measurement for new event from original event on timeline by adding new icons
2.0.2	Case-Mix Variables Baseline Health Status and Prior Treatments	Patient population with AMI event are now considered under ACS.
2.0.2	Case-Mix Variables Baseline Health Status	Collection of creatinine levels now suggested for ACS patients with PCI and CABG and for PCI and CABG patients.
2.0.2	Data Dictionary Baseline Health Status	Variable definition for collection of creatinine levels for ACS patients with PCI and CABG and for PCI and CABG patients.
2.0.3	Data Dictionary Stroke	Variable ID for Stroke changed from STROKE to STROKECOMP
2.0.3	Data Dictionary Type of Stroke	Variable ID for Type of Stroke changed from STROKETYP to STROKECOMPTYP

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