PCI REGISTRY_NOTIFICATION FORM_DATA STANDARD

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
Header					
A	Date of Admission	Patient's Date of admission to the PCI capable hospital			In DD-MM-YYYY format
B	Time of Admission	Patient's Time of arrival or first medical contact to the PCI capable hospital		If Elective procedure, time of admission will be time at ward. If primary PCI, time of admission will be time of arrival at triage. Note: Time of admission is not time of registration at PCI capable hospital.	Record time in 24 hour clock (hh:mm)
Section 1: Demographic (To change according to the country)					
1.01	Patient name	Name of the patient			Name of patient as per MyKad / Other Document ID
1.02	Hospital RN	Hospital registration number (RN)			
1.03	Identification Card No.	Identification card number of patient			To provide at least one of the identification card number: MyKad number, Old IC number, or Other Identification document number such as passport number or Armed Force ID number
1.04	Gender	Gender of the patient	Male		
			Female		
1.05	Nationality	The status of belonging to a particular nation by origin, birth, or naturalization	Malaysian	The status of origin belonging to Malaysia	
			Non Malaysian	The status of origin belonging to other nations except Malaysia	
1.06.1	Date of Birth	Patient's date of birth			In DD-MM-YYYY format. Write DOB as 01/01/yy if age is known
1.06.2	Age on admission	Autocalculated from Date of admission and Date of birth			
1.07	Ethnic Group	Race or Ethnic group of the patient	Malay		
			Chinese		
			Indian		
			Punjabi		
			Orang Asli		
			Kadazan Dusun		
			Melanau		
			Murut		
			Bajau		
			Bidayuh		
			Iban		
			Other Malaysian	For all other Malaysian Citizens whose ethnicity is not reflected in the fields above	
			Foreigner	For non-Malaysian Citizens including residents and visitors receiving treatment at the reporting centre	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
1.08.1	First Contact Number	Patient's most reachable contact number			
1.08.2	Second Contact number	Patient's second reachable contact number			
Section 2: Status Before Event					
2.01	Smoking status	Indicate if the patient has a history confirming any form of tobacco use in the past. This includes use of cigarettes / cigars / pipes/ tobacco chewing	Never	Patient has never smoked a tobacco product	
			Former	Patient has stoppped smoking tobacco products greater than 30 days before this admission	
			Current	Patient regularly smokes a tobacco product / products one or more times per day or has smoked in the 30 days prior to this admission	
			Not Available		
2.02	Medical history	Indicate if the patient has any significant medical history			
2.02.1	Dyslipidaemia	Indicate if the patient has a history of dyslipidaemia diagnosed prior to this admission to the hospital or currently receiving treatment for dyslipidaemia	Yes		
			No		
			Not Known		
2.02.2	Hypertension	Indicate if the patient has a history of hypertension diagnosed prior to this admission to the hospital or currently receiving treatment for hypertension	Yes		
			No		
			Not Known		
2.02.3	Diabetes	Indicate if the patient has a history of diabetes mellitus diagnosed prior to this admission to the hospital or currently receiving treatment for diabetes	Yes		
			No		
			Not Known		
2.02.3.1	Type of treatment for diabetes	Indicate type of treatment for diabetes	OHA	Patient uses oral medication to control their condition	
			Insulin	Patient uses insulin to control their condition with or without oral therapy	
			Non pharmacology therapy/diet therapy	Patient has received dietary advice appropriate to their condition but is not taking medictaion	
2.02.4	Family History of Premature Cardiovascular Disease	Indicate if the patient has a 1st degree family member (parents or siblings) who suffered a myocardial infaction and/or stroke <55 years old if male and <65 years old if female	Yes		
			No		
			Not Known		
2.02.5	Myocardial infarction history	Indicate if the patient has a myocardial infarction history prior to this admission to the hospital	Yes		
			No		
			Not Known		

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
2.02.6	Documented significant CAD	Indicate if the patient has angiographically-proven coronary disease or have undergone percutaneous angioplasty (PCI) or coronary artery bypass graft (CABG) prior to this admission to the hospital	Yes		When there's presence of >50% stenosis on CTA, angiogram, ischaemia on functional cardiac imaging such as nuclear, MRI, echo or positive treadmill test. **High calcium score alone is not sufficient**
			No		
			Not Known		
2.02.7	New onset angina (< 2 weeks)	Indicate if the patient has an angina in the past 2 weeks prior to this admission to the hospital	Yes		
			No		
			Not Known		
2.02.8	History of heart failure	Indicate if the patient has a history of heart failure or documented evidence (echocardiography, MRI, nuclear imaging, ventriculography) of left ventricular systolic dysfunction prior to this admission to the hospital	Yes		
			No		
			Not Known		
2.02.9	Cerebrovascular disease	Indicate if the patient has a history of stroke and/or transient ischaemic attack (TIA) or documented evidence of cerebrovascular disease (CT scan, MRI) prior to this admission to the hospital	Yes		
			No		
			Not Known		
2.02.10	Peripheral vascular disease	Indicate if the patient has a history and/or documented evidence and/or have undergone treatment for peripheral vascular disease (including **aortic aneurysm**; **peripheral artery disease**, intermittent claudication and/or previous peripheral artery stenting or bypass; **renal artery stenosis** and/or previous renal artery stenting)	Yes		
			No		
			Not Known		
2.02.11	Chronic renal failure (>200 µmol/L serum creatinine)	Indicate if the patient has history and/or documented evidence and/or have undergone treatment for chronic renal failure	Yes	when serum creatinine is >200 µmol/L	
			No		
			Not Known		
2.02.11.1	On dialysis?	Indicate if patient's with chronic renal failure is on dialysis.	Yes		
			No		
Section 3: Clinical Examination & Baseline Investigation					
3.01	Anthropometric	Measurement of human body for use in anthropological classification and comparison.			
3.01.1	Height	Measure the patient's height in m. (Measured or self reported)			**Measurements may be taken at any time prior to discharge**.

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
3.01.2	Weight	Measure the patient's weight in kg. (Measured or self reported)			**Measurements may be taken at any time prior to discharge.** However measurements taken after prolonged hospitalization (>2 weeks) or following surgery or prolonged intensive unit stay may not be accurate. Indicate if not available.
3.01.3	Body Mass Index (BMI)	A measurement of the relative percentages of fat and muscle mass in the human body, in which weight in kilograms is divided by height in meters and the result used as an index of obesity (kgm^{-2}). This will be autocalculated by the system.			
3.02	Heart rate (at start of PCI)	The heart rate recorded in beats per minute (at start of PCI) when patient on the table.			Note: HR not at emergency department/ post procedure.
3.03.1	Systolic Blood Pressure (at start of PCI)	The person's measured systolic blood pressure (at start of PCI) in mmHg. BP at time of guiding catheter (patient			Note: BP not at emergency department/ post procedure.
3.03.2	Diastolic Blood Pressure (at start of PCI)	The person's measured diastolic (in mmHg) blood pressure (at start of PCI).			
3.04	Fasting blood glucose (micromol/L)	The person's fasting blood glucose (in micromol/L).			To fill up FBG value only. If not available/ random blood glucose was taken, indicate as not available.
3.05	Hb A1c	Glycosylated hemoglobin, a biological value used in the monitoring of diabetes. Hb A1c measured in %.			Indicate if not available.
3.06.1	Total cholesterol	The person's measured total cholesterol latest level (in mmol/L).			Indicate if not available.
3.06.2	LDL Levels	The person's measured low-density lipoprotein cholesterol (LDL-C) latest level (in mmol/L).			Indicate if lab results is not available.
3.07	Baseline creatinine	The amount of serum creatinine in the blood at admission. The unit is µmol/L.			To record the absolute result of the most recent serum creatinine measurement. Indicate if not available.
3.08	Baseline ECG	ECG findings gathered at the beginning of the event	Sinus rhythm	ECG results/ patterns shows sinus rhythm	1. based on patient's presentation at the time of procedure/ patient's reason for the procedure. 2. Applicable for patient who admitted at the hospital for ACS - tick on ST deviation if there's ST elevation / depression 3. If patient admitted at another hospital for non ST-ACS, discharged and transferred to the reporting hospital for elective procedure. There's no changes in ST segment, do not tick the ST deviation option.
			Atrial fibrillation	ECG results/ patterns shows atrial fibrillation	
			2nd/3rd AVB	ECG results/ patterns shows 2nd/3rd AVB	
			LBBB	ECG results/ patterns shows LBBB	
			RBBB	ECG results/ patterns shows RBBB	
			ST Deviation	Elevation or depression of ST segment (for GRACE score)	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
3.09	Non Invasive Test	Tests that do not invade the integrity of the body.	Done	Indicate if non invasive test is is done	
			Not Done	Indicate if non invasive test is not done	
3.09.1	Types of non invasive test		Stress / Exercise Test		
			Stress Echo		
			Nuclear		
			DSE		Dobutamine Stress Echocardiography
			CT Scan		
			MRI		
			CT FFR		
3.09.2	Functional ischaemia	Indicate if the patient has functional ischaemia. Where a non-invasive test such as exercise or pharmacological stress test, radionuclide, echo, CT scan was done to rule out ischaemia. The test could be performed at this admission (prior to the PCI), or it could be a test that resulted in the admission.	Positive		
			Negative		
			Equivocal		
3.10	Glomerular Filtration Rate (GFR)				
3.10.1	MDRD (mL/min/1.73m^2)	GFR Modification of Diet in Renal Disease (MDRD): 186 x (serum creatinine (µmol/L) / 88.4) $^{-1.154}$ x AGE$^{-0.203}$ x (0.742 if female).			
3.10.2	Cockcroft-Gault (mL/min)	GFR Cockcroft-Gault formula: Male: 1.23 x (140-AGE) x WEIGHT (kg) / serum creatinine (µmol/L) Female: 1.04 x (140-AGE) x WEIGHT (kg) / serum creatinine (µmol/L).			
Section 4: Previous Interventions					
4.01.1	Previous PCI	Indicate if patient has had a prior Percutaneous Transluminal Coronary Angioplasty, Coronary Atherectomy, and/or coronary Stent done at any time prior to this PCI procedure (which may include during the current admission).	Yes		
			No		
4.01.1	Date of most recent PCI	The date on which patient had their most recent PCI.			In DD/MM/YY format. Indicate if date not available.
4.02.1	Previous CABG	Indicate if patient has had a previous Coronary Artery Bypass surgery by any approach prior to the current PCI procedure.	Yes		
			No		
4.02.2	Date of most recent CABG	The date on which patient had their most recent CABG.			In DD/MM/YY format. Indicate if date not available.

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
Section 5: Cardiac Status at PCI Procedure					
5.01	Angina type	Indicate the patient's symptom presentation or angina type on admission. Anginal pain is: a) Constricting discomfort in the front of the chest, neck, shoulders, jaw or arms. b) Precipitated by physical exertion. c) Relieved by rest or GTN in about five minutes. (http://patient.info/doctor/stable-angina-pro)	None	No angina or symptoms.	For elective patient, at that stage will be no angina. For ACS patient, they would have either atypical/ typical angina.
			Atypical	Chest pain: pain, pressure or discomfort in the chest, neck or arms not clearly exertional or not otherwise consistent with pain or discomfort of myocardial ischemic origin. (people with atypical angina have two of the features listed)	
			Typical	UAP: One of the following is necessary - angina that occurred at rest and was prolonged, usually lasting more than 20mins; new-onset angina of at least CCS III severity, recent acceleration of angina reflected by an increase in severity of at least 1 CCS class to at least CCS class III. (People with typical angina have all the listed anginal pain features)	
5.02	Canadian Cardiovascular Score (CCS)	Canadian Cardiovascular Angina Classification Score (CCS) of this patient.	Asymptomatic	Class 0	
			CCS 1	Class 1: Ordinary physical activity, (eg. walking or climbing stairs) does not cause angina. Angina occurs with strenuous or rapid or prolonged exertion at work or recreation.	
			CCS 2	Class 2: Slight limitation of ordinary activity. Angina may occur with moderate activity such as walking or climbing stairs rapidly, walking uphill, walking or stair climbing after meals or in cold, in wind, under emotional stress,or only during the first few hours after wakening: walking more than two blocks on the level, or climbing more than one flight of stairs at normal pace under normal conditions.	
			CCS 3	Class 3: Marked limitation of ordinary physical activity. Angina may occur after walking one or two blocks on the level or climbing one flight of stairs under normal conditions at a normal pace.	
			CCS 4	Class 4: Inability to perform any physical activity without discomfort; angina may be present at rest.	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
5.03	NHYA	Indicate the patient's NYHA classification (A functional and therapeutic classification for prescription of physical activity for cardiac patients - uses New York Heart Association classification).	NYHA I	Patient has cardiac disease but without resulting limitations of ordinary physical activity; Ordinary physical activity (eg. walking several blocks or climbing stairs) does not cause undue fatigue or dyspnea. Limiting symptoms may occur with marked exertion.	
			NYHA II	Patient has cardiac disease resulting in slight limitation of physical activity. Patient is comfortable at rest. Ordinary physical activity such as walking more than 2 blocks or climbing more than one flight of stairs results in limiting symptoms (eg. fatigue or dyspnea).	
			NYHA III	Patient has cardiac disease resulting in marked limitation of physical activity. Patient is comfortable at rest. Less than ordinary activity (eg. walking one to two level blocks or climbing one flight of stairs) causes fatigue or dyspnea.	
			NYHA IV	Patient has dyspnea at rest that increases with any physical activity. Patient has cardiac disease resulting in ability to perform any physical activity without discomfort. Symptoms may be present even at rest. If any physical activity is undertaken, discomfort is increased.	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
5.04	Killip Class (STEMI & NSTEMI)	Identifies the Killip class (for STEMI & NSTEMI patients only), as a measure of haemodynamics compromise, of the person at the time of presentation.	I No clinical signs of HF	Class I: includes individuals with no clinical signs of heart failure.	For patients undergoing Elective PCI, Killip Class will be Not Applicable. Killip class only for STEMI & NSTEMI patients at admission.
			II Left Heart Failure (LHF)	Class II: includes individuals with rales or crackles /rales in the lungs, an S_3, and elevated jugular venous pressure.	
			III Acute Pulmonary Oedema (APO)	Class III: Crackles/rales over more than 50% of the lung fields.	
			IV Cardiogenic Shock	Class IV: Cardiogenic shock. Clinical criteria for cardiogenic shock are: hypotension (a systolic blood pressure of less than 90mmHg for at least 30mins or the need for supportive measures to maintain a systolic blood pressure of greater than or equal to 90mmHg), end-organ hypoperfusion (cool extremities or a urine output of less than 30ml/h, and a heart rate of greater than or equal to 60beats/minute), the haemodynamic criteria are a cardiac index of no more than 2.2l/min per square meter of body-surface area and a pulmonary-capillary wedge pressure of at least 15mmHg.	
			Not available/ Not applicable		
5.05	Coronary Artery Disease (CAD) Presentation	Refers to teritory of infarct	STEMI	New or presumed new ST-elevation >1mm seen in any location on the index ECG or on any subsequent ECG, together with one or more positive cardiac enzymes, based on laboratory ranges in use at each hospital	Definition by http://www.outcomes-umassmed.org/GRACE/Files/Standard_Definitions.pdf
			NSTEMI	No new ST-elevation seen on the index or on any subsequent ECG, with one or more positive cardiac enzymes, based on laboratory ranges in use at each hospital.	
			Unstable angina	Angina (or other distinct chest pain patterns) without evidence of biochemical myocardial necrosis BUT with any 1 of the following (ACC): (1) Angina occurring at rest and prolonged >20mins; (2) New-onset angina of at least CCS III severity; (3) Recent acceleration of angina by at least 1 CCS class (6 weeks/ last two months)	
			Chronic stable angina	Angina without a change in frequency or pattern for the 6 weeks/ 2 months prior to presentation/ procedure. Angina is controlled by rest/ or sublingual/ oral/ transcutaneous medications.	

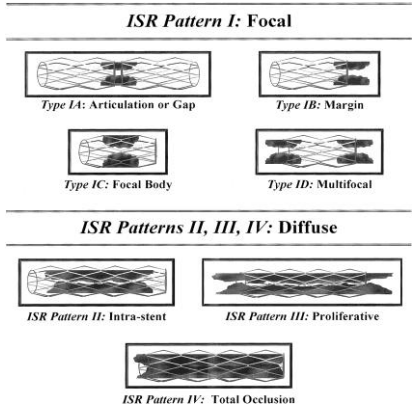
ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
5.05.1	If STEMI	If STEMI, specify the location	Anterior	Refers to infarction of the anterior wall of left ventricle. It occurs by occluding the left anterior descending artery (LAD) branch of left coronary artery. ECG findings are ST-segment elevation in lead V1 â€“ V6 with reciprocal ST-segment depression in inferior leads (II, III and aVF).	
			Posterior	A posterior STEMI occurs when the posterior area of the left ventricle, usually supplied by posterior descending artery (a branch of right coronary artery in 80% cases) is occluded by a thrombus. In standard 12-lead ECG, it may shows tall R wave with ST-segment depression in lead V1 - V4. The ST-segment depressions in lead V1 - V4 can be observed as mirrored ST-segment elevations and the tall R waves are the Q waves. Posterior STEMI is confirmed in 15 leads ECG by the presence ofÂ ST-segment elevation in leads V7 - V9 (posterior leads). Leads V7 - V9 are placed on the posterior chest wall (V7 on the left posterior axillary line, V8 on the tip of left scapula and V9 on the left paraspinal region; all are placed in the same horizontal plane as V6).	
			Lateral	Refers to infarction of the lateral wall of left ventricle. It is due to blockage of the first diagonal branch of the left anterior descending artery (LAD) and the obtuse marginal branch of the left circumflex artery (LCX). ECG changes are ST-segment elevation in lead I, aVL, V5 and V6 with reciprocal ST-segment depression in inferior leads (II, III and aVF).	
			Right-sided		
			Inferior	It occurs when the inferior wall of left ventricle is infarcted by blocking of the right coronary artery (RCA). ECG findings are ST-segment elevation in leads II, III and aVF, with reciprocal ST-segment depression in leads I and aVL.	
			Left Main Stem		
			Others, specify		

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
5.06	STEMI Event (Complete if <24 hours since onset of STEMI symptoms.)				
5.06.1	STEMI onset	Indicate date of symptoms onset (in dd/mm/yy format) and time (in hh:mm format).	Date		
			Time		
5.06.2	Arrival at first hospital (non PCI hospital)	Indicate date of first hospital arrival (in dd/mm/yy format) and time (in hh:mm format).	Date		Applicable ONLY if patient transferred from non PCI hospital. **To be filled in at PCI hospital.**
			Time		
5.06.3	Arrival at PCI hospital	Patient's date of arrival at PCI hospital (in dd/mm/yy format) and time (in hh:mm format).	Date		Indicate if not applicable.
			Time		
5.06.4	First device (balloon inflation / stent / aspiration)	Indicate the date and time of the intracoronary treatment device deployment.	Date		If the exact time of first treatment device deployment is not known, indicate the date and time of the start of the procedure in hh:mm format. Indicate if not applicable.
			Time		
5.06.5	In hospital STEMI	Indicate the date and time of patient who developed STEMI in PCI capable hospital.	Date		Indicate if not applicable.
			Time		
5.07	EF status (at time of PCI procedure)	The percentage of the blood emptied from the left ventricle at the end of the contraction. Where EF estimated: NORMAL: LVEF is greater than 50%. MILDLY REDUCED: LVEF is > or equal to 45% but less than or equal to 50% MODERATELY REDUCED: LVEF is > or equal to 35% but less than 45% SEVERELY REDUCED: LVEF is less than 35%			The most recent test within the last 6 months, including the current procedure and up to discharge following the procedure. Do not use greater than or less than symbols. If nuclear scan, echo or angiogram did not yield a digital EF%, provide an estimate from reviewing the study. If only a range is estimated for the EF, i.e. in ECHO the midpoint of the range should be the value noted.
5.08	Cardiac arrest	Abrupt cessation of heartbeat	Out of hospital	Indicate if the patient was admitted following an out of hospital cardiac arrest	
			At admission (for GRACE score)		
5.09	GRACE Score (only for STEMI & NSTEMI patients)				
Section 6: Cath Lab Visit					
6.01.1	Date of procedure	Indicate date of PCI procedure in dd/mm/yy format.			
6.01.2	Time of procedure	Indicate time of PCI procedure in hh:mm format.			
6.02.1	PCI status	Indicate status of PCI.	Elective		
			NSTEMI/UA		
			STEMI		

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
6.02.1.1	If Elective	PCI performed in patient with stable CAD either planned/staged PCI following coronary angiogram done earlier or PCI performed during the time of angiogram (ad-hoc)	Staged PCI	Indicate if this PCI is being performed as part of a multi-vessel revascularization strategy	
			Ad hoc	If this is the initial PCI of the multi-vessel strategy	If patient had lytic and referred for PCI after stable.
6.02.1.2	If NSTEMI/UA	PCI for patients admitted with NSTEMI/UA	Urgent (within 24 hours)	Intervention done within 24 hours of admission	
			In hospital (>24 hours)	Intervention done after 24 hours of same admission	
			PCI within 30 days post event	PCI for NSTEMI in different admission	
6.02.1.3	If STEMI	PCI for patient admitted with STEMI following different treatment strategies	Primary	PCI without prior thrombolytic therapy	Delayed routine PCI and delayed selective PCI at the same admission. Eg. 1) Patient given lytic and failed. Transferred for rescue PCI. But pain resolved. This scenario will be recorded as pharmacoinvasive. 2) If PCI done after 1 or 2 days later, considered as delayed routine PCI. 3) Missed MI patient, not given lytic and referred for PCI. Considered as delayed routine PCI.
			Rescue	PCI after failed thrombolytic therapy	
			Pharmacoinvasive	PCI within 6 - 24 hrs after thrombolytic therapy (regardless of the outcome)	
			Delayed Routine PCI	PCI after 24hrs of thrombolytic therapy/ without thrombolytic therapy	
			Delayed Selective PCI	PCI after 24hrs of thrombolytic therapy, with indication for angiogram (post infract angina/ heart failure/ stress test pre-discharge is positive)	
6.03	Medication	Medication given to the patient during cath lab visit.			
6.03.1	Thrombolytics	Indicate if thrombolytic medication was given to the patient prior to the procedure.	Yes		
			No		
6.03.1.1	If Thrombolytics yes	Indicate time period thrombolytics was given.	<3 hours		
			3-6 hours		
			6-12 hours		
			12-24 hours		
			>24 hours		
6.03.1.2	Types of thrombolytic agents	Indicate types of thrombolytic agents administered to the patient	Streptokinase		
			Tenecteplase		
			tPA		
			Other, specify		
6.03.2	IIb / IIIa Blockade	Indicate if IIb / IIIa blockade was given to the patient.	Yes	Indicate when it was given: Prior / During / After	
			No		
6.03.3	Heparin	Indicate if Heparin medication was given to the patient.	Yes		
			No		
6.03.4	LMWH	Indicate if LMWH medication was given to the patient.	Yes		
			No		

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
6.03.5	Ticlopidine	Indicate if Ticlopidine medication was given to the patient.	Yes		
			No		
6.03.6	Fondaparinux	Indicate if Fondaparinox medication was given to the patient.	Yes		
			No		
6.03.7	Bivalirudin	Indicate if Bivalirudin medication was given to the patient.	Yes		
			No		
6.03.8	Aspirin	Indicate if Aspirin medication was given to the patient.	Yes		
			No		
6.03.9	Prasugrel	Indicate if Prasugrel medication was given to the patient.	Yes		
			No		
6.03.10	Ticagrelor	Indicate if Ticagrelor medication was given to the patient.	Yes		
			No		
6.03.11	Clopidogrel	Indicate if Clopidogrel medication was given to the patient.	Yes		
			No		
6.03.11.1	First/ load dose of clopidogrel	Clopidogrel first/ load dose given to the patient.	75mg		
			300mg		
			600mg		
			≥1200mg		
6.03.12	Others, specify	Indicate and specify if other medication was given to the patient.	Yes		
			No		
6.04	Planned duration of DAPT	Where clopidogrel/ ticlopidine was given to the patient, specify the planned duration for treatment (choose the time frame closest)	1 month		
			3 months		
			6 months		
			12 months		
			>12 months		
			Not Available		
6.05	Percutaneous entry	The percutaneous entry location used to provide arterial vascular access for the procedure.	Brachial	either a cutdown or percutaneous puncture of either brachial artery	https://www.escardio.org/static_file/Escardio/EU-affairs/CARDS-dataset-PCI-1104.pdf
			Femoral	percutaneous puncture of either femoral artery	
			Radial	percutaneous radial approach	
			Ulnar	percutaneous ulnar approach	
6.06	Closure device	Indicate if a vascular arterial closure device was used.	No		
			Seal		
			Suture		
			Exoseal		
			Other, specify	Other vascular arterial closure device used if none of the specified categories are applicable.	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
6.07	Coronary disease >50% stenosis	Indicate coronary system with > 50% of stenosis	LAD	Left Anterior Descending Artery	Coronary systems are defined as: LAD-Diag / Cx-OM / RCA. LAD-Diag is one coronary system as is Cx-OM and the RCA. LMCA is 2 coronary systems as it gives rise to the LAD & Cx systems - therefore is multi-vessel disease. Single vessel disease (SVD) defined as lesion of ≥ 50% stenosis in 1 coronary system. Multi vessel disease (MVD) defined as lesion of ≥ 50% stenosis in 2 or more coronary systems.
			Graft	Bypass graft PCI	
			LCx	Left Circumflex Artery	
			LMS	Left Main Stem Coronary Artery	
			RCA	Right Coronary Artery	
6.08	Fluoroscopy time	Fluoroscopy time in minutes.			Indicate if not available.
6.09	Total Dose	Total dose in mGy.			Indicate if not available.
6.10	Contrast volume	Contrast volume in ml.			Indicate if not available.
Section 7: PCI Procedure Details					
7.01	Total no. of lesion treated	Indicate the number of lesion treated.			Each lesion need to be filled in separate lesion form. For skip lesions, document as two lesions. For bifurcation, if intervention involves sidebranch (SB), to record SB as a separate lesion.
7.02	Dominance	Indicate the dominance	Left		
			Right		
			Co-dominance		
7.03	Lesion code	Indicate the lesion code. Refer to Lesion code list for description.			
7.04	Coronary lesion	Indicate the status of the coronary lesion.	De novo	De novo is defined as a lesion that is diagnosed with stenosis and treated for the first time i.e. no prior intervention at that site.	
			Restenosis (no prior stent)	Restenosis is defined as a lesion that has had a prior intervention e.g., rotablator, laser, POBA, brachytherapy, but NO prior stent.	
			Stent thrombosis	Indicate if the previously treated & stented lesion is being treated because of the presence of a thrombus in the stent (or within 5mm of the prior stent edge). A thombus is suggested by certain angiograph features, haziness, reduced contrast, density or contrast persistence, irregular lesion contours or globular filling defects.	
			In stent restenosis	ISR (in stent restenosis) is defined as a lesion that has had a prior stent to that site.	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
7.04.1	Stent thrombosis -classification	Indicate classification of stent thrombosis - based on the elapsed time since stent implantation	Acute	<24 hours	(https://www.escardio.org/Journals/E-Journal-of-Cardiology-Practice/Volume-5/Stent-thrombosis-definitions-mechanisms-and-prevention-Title-Stent-thrombos)
			Sub Acute	1-30 days	
			Late	>30 days	
			Very Late	>12 months	
7.04.2	In stent restenosis - duration	Indicate the duration between theprevious PCI and current procedure - ISR at the same lesion			
7.04.3	In stent restenosis - prior stent type	Indicate type of prior stent used.	DES		
			BMS		
			BVS		
			Mg		
			Others	Other prior stent type if none of the specified categories are applicable.	
7.04.4	In stent restenosis - classification	Indicate classification of ISR 	Class I: Focal ISR group	Lesions are <= 10 mm in length and are positioned at the unscaffolded segment (ie, articulation or gap), the body of the stent, the proximal or distal margin (but not both), or a combination of these sites (multifocal ISR)	Clinical Investigation and Reports: Angiographic Patterns of In-Stent Restenosis: Classification and Implications for Long-Term Outcome Roxana Mehran, George Dangas, Andrea S. Abizaid, Gary S. Mintz, Alexandra J. Lansky, Lowell F. Satler, Augusto D. Pichard, Kenneth M. Kent, Gregg W. Stone, and Martin B. Leon Circulation. 1999;100:1872-1878, doi:10.1161/01.CIR.100.18.1872
			Class II: “Diffuse intrastent” ISR	Lesions are > 10 mm in length and are confined to the stent(s), without extending outside the margins of the stent(s)	
			Class III: “Diffuse proliferative” ISR	Lesions are > 10 mm in length and extend beyond the margin(s) of the stent(s)	
			Class IV: ISR with “total occlusion”	Lesions have a TIMI flow grade of 0	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
7.05	Lesion type	The lesion type according to ACC/AHA guidelines. Choose ONE only of A / B1 / B2 / C.	A	Minimally complex, discrete (<10mm), concentric, readily accessible, lesion in non-angulated segment (<45 degrees), smooth contour, little or no calcification, less than totally occlusive, not ostial in location, no major side branch involvement, absence of thrombus.	
			B1	One type B characteristic: lesion moderately complex, tubular (10-20mm), eccentric,moderately tortuosity of proximal segments, lesion in moderately angulated segment (>45 degrees but < 90 degrees), irregular contour, moderate to heavy calcification, total occlusions less than 3 months old, ostial in location, bifurcation lesions requiring double guide wires, some thrombus present.	
			B2	More than one type B characteristic.	
			C	Severely complex diffuse (>20mm), excessive tortuosity of proximal segment, lesion in extremely angulated segment > 90 degrees, total occlusion greater than 3 months old or bridging collaterals, inability to protect major side branches, degenerated vein graft with friable lesions.	
7.06	Location in graft (for graft PCI only)	Where a graft PCI is being undertaken, indicate the location of the lesion.	Ostial	Within 3mm of the origin of graft.	
			Body		
			Native	Native vessel.	
			Anastomosis	Within 3mm of anastomosis	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
7.07	Lesion description	Indicate further lesion determination.	Ostial	Indicate if the lesion is within 3mm of the origin of the vessel	
			CTO > 3 months	Indicated if the lesion treated was presumed to be a CTO defined as being > 3 months old and/or bridging collaterals. CTP lesions have 100% pre-procedure stenosis and should not relate to a clinical event leading to this procedure.	
			Thrombus		
			Calcified lesion		
			LMS		
			Bifurcation	Indicate if the lesion is at a bifurcation / trifurcation. A bifurcation / trifurcation is a division of a vessel into at least two branches, each of which is >2 mm or greater in diameter. In a bifurcation / trifurcation the plaque extends on both sides of the bifurcation point. It need not progress down both branches.	
			Not Applicable	Indicate if not applicable.	
7.07.1	If bifurcation, status of Side Branch	Indicated if side branch is treated/ not treated	SB treated	Side branch treated	
			SB not treated	Side branch not treated	
7.07.1	Medina Classification	It involves assigning a binary value (1,0) to each of the three components of a bifurcation (proximal region of main branch, distal region of main branch, and the side branch) depending whether there is more than (1) or less than (0) fifty percent lesion stenosis. If only proximal segment of the main branch has a significant lesion, it becomes Medina 1,0,0. If distal segment of main branch alone is involved, it becomes 0,1,0. Sole involvement of side branch is designated 0,0,1 and involvement of all the three is designated 1,1,1 and so on.	MB proximal	Indicate 0 or 1.	
			MB distal	Indicate 0 or 1.	
			Side branch 1	Indicate 0 or 1.	
			Side branch 2	Indicate 0 or 1.	
7.08.1	Pre-PCI % of stenosis	Indicate the % of most severe pre-procedure stenosis assessed. This does not include collateral circulation. STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percentage stenosis noted.			If no stenosis then enter 0%.

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
7.08.2	Pre TIMI Flow	Indicate the pre-procedure TIMI flow for the segment identified.	TIMI-0	No perfusion. There is no antegrade flow beyond the obstruction in an occluded artery.	
			TIMI-1	Partial, but incomplete filling of the coronary artery. Contrast material passes beyond the area of obstruction but fails to opacify the entire coronary bed distal to the obstruction for the duration of the angiographic panning.	
			TIMI-2	Partial perfusion. Contrast material passes across the obstruction and opacifies the coronary artery distal to the obstruction. However, the rate of entry of contrast material into the vessel distal to the obstruction or its rate of clearance from the distal bed, or both, is perceptibly slower than the flow into or rate of clearance from comparable areas not perfused by the previously occluded or infarct-related vessel (e.g., opposite coronary artery or the coronary bed proximal to the obstruction).	
			TIMI-3	Complete and brisk flow/complete perfusion. Ante-grade flow into the bed distal to the obstruction, and clearance of contrast material from the involved bed as rapid as clearance from an uninvolved bed in the same vessel or the opposite artery.	
7.09.1	Post-PCI % of stenosis	Indicate the % of most severe post-procedure stenosis assessed. This does not include collateral circulation. If no stenosis then enter 0%.			
7.09.2	Post TIMI Flow	Indicate for the segment identified the post-procedure TIMI flow.	TIMI-0		
			TIMI-1		
			TIMI-2		
			TIMI-3		
7.10	Estimated lesion length	Unit in milimetre.			< 200 mm
7.11.1	Perforation	Indicate for the treated segment if a perforation occurred during the procedure.	Yes		
			No		

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
7.11.2	Classification of Perforation	Indicate coronary perforation classification	Type I	extraluminal crater without extravasation	Ellis SG, Ajluni S, Arnold AZ, Popma JJ, Bittl JA, Eigler NL, et al. Increased coronary perforation in the new device era.Incidence, classification, management and outcome. Circulation. 1994;90:2725–30.
			Type II	pericardial or myocardial blushing	
			Type III	perforation ≥1-mm diameter with contrast streaming	
			Cavity spilling	perforation into an anatomic cavity chamber, coronary sinus, etc.	
7.12.1	French size	To determine French size of the guiding catheter used to cannulate the ostium of the coronary artery. Indicate whether guiding catheter/ guiding sheath.	Guiding catheter	A catheter that makes it easier to enter that vessel with other devices or instruments. Guide catheters are used to facilitate the placement of lasers, stents, and balloons for angioplasty.	
			Guiding sheath	A device used for access and bloodless exchange of guide wires and catheters. They also serve as a protection of the vessel or a drainage tract during manipulation and thereby also reduce pain for the patient.	
7.12.2	Size of guiding catheter/ guiding sheath	The largest size used should be indicated.			Sizes available are 4 / 5 / 6 / 7 / 8. If Others, please specify.
7.12.3	Types of guiding catheter	To indicate types of guiding catheter used			Classification based on list of guiding catheter
7.13	Was lesion treated?				
7.14	Lesion result	Indicate for the treated lesion whether the treatment was successful or unsuccessful.	Successful	Defined as <50% residual stenosis for POBA lesion or <20% residual stenosis for stented lesion	
			Unsuccessful		
7.15.1	Dissection (Post Procedure)	Indicate for the treated segment (or for a significant side branch) if a dissection > 5 mm was observed during the PCI procedure. Dissection is defined as the appearance of contrast materials outside of the expected luminal dimensions of the target vessel and extending longitudinally beyond the length of the lesion.	Yes		
			No		
7.15.2	If Dissection yes		Flow limiting		
			Non Flow limiting		
7.16.1	Slow flow/ No Reflow	Indicate for the treated segment if there was a period where slow flow/ no reflow phenomenon was noted during the PCI procedure.	Yes		
			No		
7.16.2	If Slow flow/ No Reflow is yes		Transient	Pertains to temporary lack of flow distal to the treated segment.	
			Persistent	Where persistent no reflow has occurred.	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
7.17	Stent / DEB details for lesion	Indicate types of stents used for each lesion treated. Please indicate diameter and length of stents used (in mm)			Please refer to Stent List
7.18.1	Predilatation: Maximum balloon size	For the treated lesion, indicate the predilatation maximum balloon diameter size (mm)			
	Predilatation: Types of Balloon	Indicate types of balloons used - regular, NC, cutting or scoring balloon			
7.18.2	Postdilatation: Maximum balloon size & pressure	For the treated lesion, indicate the postdilatation maximum balloon diameter size (mm) and deploy pressure (atm)			
7.19	Intracoronary devices used	Indicate intracoronary devices used	IVUS		
			OCT		
			FFR		
			Aspiration catheter		
			POBA		
			Micro catheter		
			Angiojet		
			Rotablator		
			Extension catheter		
			Coil		
			Double lumen micro catheter		
			Embolic protection		
			Other, specify	Details of other intracoronary device if none of the specified categories are applicable.	
7.19.1	Type of Embolic Protection		Filter		
			Proximal		
7.20	Other Adjunctive Procedure		Yes		
			No		
7.20.1	If Other Adjunctive Procedure is used	Indicate types of other adjunctive procedure used	Ventilator		
			Temporary Cardiac Pacing Wire		
7.21	Circulatory support		IABP		
			Impella		
			ECMO		
			PCPS		
7.22	Direct stenting	Stent deployment without prior treatment of stenotic segment	Yes		
			No		

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
Section 8: Post Procedural Complication					
8.01	Outcome				
8.01.1	Significant Periprocedural MI	Indicate the NEW presence of a periprocedural MI during the cath. lab visit or after lab visit until discharge (or before any subsequent lab visits) as documented by at least 1 of the following criteria. Note: Must be distinct from the index event 1. Evolutionary ST-segment elevations, development of new Q-waves in 2 or more contiguous ECG leads, or new or presumably new LBBB pattern on the ECG. 2. Biochemical evidence of myocardial necrosis. This can be manifested as (a) CK-MB > 3x the upper limit of normal or, if CK-MB not available (b) total CK > 3x upper limit of normal. (Because normal limits of certain blood tests may vary, please check with your lab for normal limits for CK-MB and total CK)	Yes		
			No		
			Not Available		
8.01.1.1	If Significant Periprocedural MI yes		Rise in CK/CKMB > x3 URL		
			Rise in Troponin > x5 URL		
			ECG changes		
8.01.2	Emergency Reintervention/PCI	Indicate if the patient required an UNPLANNED PCI during hospitalization and prior to discharge. Only include ischemia driven in-hospital PCI (PCI that occurs as a complication related to the index PCI e.g., – stent thrombosis, dissection with target vessel occlusion).	Yes		
			No		
			Not Available		
8.01.2.1	Stent thrombosis	Indicate if the patient has stent thrombosis following PCI during hospitalization and prior to discharge.	Yes		
			No		
8.01.2.2	Dissection	Indicate if the patient has dissection following PCI during hospitalization requiring emergency re-intervention	Yes		
			No		
8.01.2.3	Cardiac Perforation	Indicate if the patient has cardiac perforation which occurred during PCI	Yes		
			No		
8.01.2.4	Coronary Perforation	Indicate if the patient has coronary perforation during PCI	Yes		
			No		
8.01.2.5	New ischaemia	Indicate if the patient has new ischaemia following index PCI during hospitalization and prior to discharge.	Yes		
			No		
8.01.2.6	Cardiac tamponade	Indicate if the patient has cardiac tamponade when the patient had an PCI	Yes		
			No		

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
8.01.3	Bail-out CABG	Indicate if the patient underwent or was transferred for an UNPLANNED CABG surgery during the hospitalization and prior to discharge. UNPLANNED = Urgent / emergent CABG as a complication related to the index PCI (eg-secondary to stent thrombosis, left main or TVR dissection, coronary perforation, unsuccessful INDEX PCI). This also applies to where the CABG was precipitated due to worsening, sudden chest pain, CHF, AMI or anatomy.	Yes		
			No		
8.01.4	Cardiogenic shock (after procedure)	Clinical criteria for cardiogenic shock are: - hypotension (a systolic blood pressure of less than 90 mmHg for at least 30 minutes or the need for supportive measures to maintain a systolic blood pressure of greater than or equal to 90mmHg) - end-organ hypoperfusion (cool extremities or a urine output of less than 30 ml/h, and a heart rate of greater than or equal to 60 beats per minute). -The haemodynamic criteria are a cardiac index of no more than 2.2 l/min per square meter of bodysurface area and a pulmonary-capillary wedge pressure of at least 15 mmHg.	Yes		
			No		
8.01.5	Arrhythmia (VT/VF/Brady)	Indicate if the patient suffered a new episode or acute recurrence of an atrial or ventricular arrhythmia requiring treatment or a new episode of high-level A-V block (defined as third-degree A-V block or second-degree A-V block with bradycardia requiring pacing).	Yes		
			No		
8.01.6	TIA / Stroke	Indicate if the patient experienced a Cerebrovascular Accident (CVA) noted during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits), as documented by CT confirmation.	Yes		
			No		
8.01.7	Tamponade	Indicate if there was fluid in the pericardial space compromising cardiac filling, and requiring intervention during the cath. lab visit or after lab visit until discharge (or before any subsequent lab visits). This should be documented by either: 1. Echo showing pericardial fluid and signs of tamponade such as right heart compromise, or 2. Systemic hypotension due to pericardial fluid compromising cardiac function.	Yes		
			No		
8.01.8	Contrast reaction	Indicate if the patient experienced a contrast reaction during the cath lab visit or discharge (or before any subsequent lab visits). Contrast reaction is defined as following: 1. Anaphylaxis-including bronchospasm and/or vascular collapse, 2. Urticaria, 3. Hypotension-prolonged depression of blood pressure below 70mm Hg.	Yes		
			No		

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
8.01.9	New onset/ worsened heart failure	Indicate if the patient experienced documented new onset CHF or an acute reoccurrence of CHF which necessitated new or increased pharmacologic therapy during the cath. lab visit or after lab visit until discharge (or before any subsequent lab visits). CHF can be diagnosed based on careful history and physical exam, or by one of the following criteria: 1. Paroxysmal nocturnal dyspnea (PND) and/or fatigue 2. Dyspnea on exertion (DOE) due to heart failure 3. Chest X-Ray (CXR) showing pulmonary congestion 4. Pedal edema or dyspnea treated with medical therapy for heart failure.	Yes		
			No		
8.01.10	Worsening renal impairement (rise of post procedural creatinine > 25% from baseline)	Indicate if the patient experience acute or worsening renal failure during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits) resulting in one or more of the following: 1. Increase of serum creatinine to >20mmol/L and two times the baseline creatinine level. (ACC) 2. A new requirement for dialysis.	Yes		
			No		
8.02	Vascular complications				
8.02.1	Bleeding	The person's episode of bleeding as described by the thrombolysis in myocardial infarction (TIMI)criteria. Indicate if bleeding occurred during or after the cath. lab visit until discharge. The bleeding should require a transfusion and/or prolong the hospital stay and/or cause a drop in haemoglobin > 3.0 gm/dl.	Yes	Indicate when there is an event of bleeding.	
			No	No bleeding event that meets the major or minor definition.	
8.02.1.1	Classification of bleeding	Indicate the classification of bleeding	Minimal	Non-CNS bleeding, non-overt bleeding, <3g/dL Hb drop.	
			Minor	Non-CNS bleeding with 3-5g/dL Hb drop.	
			Major	Any intracranial bleed or other bleeding ≥ 5g/dL Hb drop.	
8.02.1.2	Bleeding site	Indicate the site where bleeding occurred.	Retroperitoneal	Indicate whether retroperitoneal bleeding occurred during or after the cath lab visit until discharge. The bleeding should require a transfusion and/or prolong the hospital stay, and/or cause a drop in haemoglobin > 3.0 gm/dL.	
			Percutaneous entry site	Indicate whether bleeding occurred at the percutaneous entry site during or after the cath lab visit until discharge. The bleeding should require a transfusion and/or prolong the hospital stay, and/or cause a drop in haemoglobin >3.0 gm/dL. Bleeding at the percutaneous entry site can be external or a hematoma >10 cm for femoral access or >2 cm for radial access; or >5 cm for brachial access.	

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
			Others, specify	Specify: e.g. Genital/Urinary, Gastrointestinal, Unknown. The bleeding should require a transfusion and/or prolong the hospital stay, and/or cause a drop in haemoglobin > 3.0 gm/dL.	
8.02.2	RBC/ Whole blood transfusion	Indicate if the patient required a RBC/ whole blood transfusion at any time after the lab visit & prior to discharge.	Yes		
			No		
8.02.3	Access site occlusion	Indicate whether an access site occlusion occurred at the site of percutaneous entry during the procedure or after the lab visit but before any subsequent lab visits. This is defined as total obstruction of the artery usually by thrombus (but may have other causes) usually at the site of access requiring surgical repair. Occlusions may be accompanied by absence of palpable pulse or doppler.	Yes		
			No		
8.02.4	Loss of radial pulse	Damage to the radial artery and caused loss of radial pulsation	Yes		
			No		
8.02.5	Dissection	Indicate whether a dissection occurred at the site of percutaneous entry during the procedure or after lab visit but before any subsequent lab visits. A dissection is defined as a disruption of an arterial wall resulting in splitting and separation of the intimal (subintimal) layers.	Yes		
			No		
8.02.6	Pseudoaneurysm	Indicate whether a pseudoaneurysm occurred at the site of percutaneous entry during the procedure or after lab visit but before any subsequent lab visits. Do not code for pseudoaneurysms noted after discharge. Pseudoaneurysm is defined as the occurrence of a disruption and dilation of the arterial wall without identification of the arterial wall layers at the site of the catheter entry demonstrated by arteriography or ultrasound.	Yes		
			No		
8.02.6.1	If pseudoaneurysm Yes, treatment	Indicate the treatment used for a patient complicated with a pseudoaneurysm	Ultrasound compression		
			Surgery		
			Others, specify	Other type of treatment for the occurance of pseudoaneurysm if none of the specified	
8.02.7	Perforation	Indicate for the treated segment if a perforation occurred during the procedure.	Yes		
			No		
Section 9: Outcome at Discharge					
9.01	Outcome	Specify whether the patient was alive or dead at discharge from the hospitalization in which the procedure occurred.	Alive		
			Death		
			Transferred to other centre		

ID	Field name / prompt	Definition	Field content	Definition of field options	Remarks
9.01.1	If Alive, Date of discharge	The date on which the patient was discharged from hospital following the index PCI			In dd-mm-yy format
9.01.2	Medication	Indicate the medication prescribed to patient at discharge.	Aspirin		
			Clopidogrel		
			Ticlopidine		
			Warfarin		
			Prasugrel		
			Ticagrelor		
			NOAC		
			Statin		
			Beta Blocker		
			ACE inhibitor		
			ARB		
			Other antiplatelet, specify		
			Others, specify		
9.01.3.1	If Death, Date of Death	Date of death of the patient			In dd-mm-yy format
9.01.3.2	Primary cause of death	The Primary cause of death of the patient i.e. the first significant abnormal event which ultimately led to death.	Cardiac	Indicates that the cause of death was sudden death, MI, unstable angina or other CAD, heart failure or arrhythmia.	
			Infection	Indicates an infective cause of death.	
			Renal	Indicates a renal cause of death.	
			Vascular	Indicates a vascular cause of death e.g, arterial embolism, pulmonary embolism, ruptured aortic aneurysm or dissection.	
			Neurological	Indicates a neurologic cause of death e.g.,	
			Pulmonary	Indicates a pulmonary cause of death e.g., respiratory failure, pneumonia.	
			Others, specify	All other causes e.g., liver failure, trauma, cancer.	
9.01.3.3	Location of death	The location at which the patient died	In Lab	death on catheter laboratory table	
			Out of lab		
9.01.4.1	If Transferred to other centre, Date of Transfer	The date on which the patient transferred to another centre			In dd-mm-yy format
9.01.4.2	Name of hospital	Indicate name of the centre patient was transferred to.			For patients transferred out of a registry hospital, data collection for the Initial CRF will end with the transfer and indication of purpose of transfer.