

IRISH HEART ATTACK AUDIT

NATIONAL REPORT 2021

APPENDICES



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APPENDIX 1: CARDIAC SERVICES MAPPING



Cardiac Services

Health Atlas Ireland Geospatial Analysis

Summary updated Mar 2023



Cardiac service locations

7 service locations Cork, Derry, Galway, James, Limerick, Mater, Waterford
6 service locations Cork, Derry, Galway, James, Limerick, Mater

Methodology

- 1) Travel zone scenarios: Open Street Maps 2021; max travel zone = 100% speed limit; sub-max travel zone = 90% motorway and 80% other road type speed limits.
- 2) Population denominators: CSO Census 2016; age 20+ years & age 55+ years; projections (M2, F2 Dublin outflow) - Atlas interpolation of CSO projections (see Atlas Finder documentation).
- 3) Health Atlas Ireland Spiderwebs: convex hull; coverage by zone based on the CSO small area (SA) – proportion of each SA population included determined by the percentage of its area included in the zone.

Results

Table 1 shows the estimated population coverage (20+ years) and Table 2 shows the estimated population coverage (55+ years) for the travel zone scenarios from the 6 and 7 cardiac service locations for each of the specified four years

The results provide indicative values, and should be interpreted in the context of the methodology and the available data.

Table 1. Estimated population 20 + years (Census 2016, projected 2025, 2030, 2035) within 60, 90 and 120 mins travel times of 6 and 7 service locations at max and sub-max travel speeds.

Year & scenarios	Inner zone 60 mins		Middle zone 90 mins		Outer zone 120 mins		All zones		Outside all zones		Total population 20+ years
2016	No.	%	No.	%	No.	%	No.	%	No.	%	3452497
7 Max	3128259	90.61	291866	8.45	31006	0.90	3451132	99.96	1365	0.04	
7 Sub-max	2914252	84.41	401754	11.64	119982	3.48	3435989	99.52	16508	0.48	
6 Max	2906760	84.19	501527	14.53	42833	1.24	3451120	99.96	1377	0.04	
6 Sub-max	2653705	76.86	549911	15.93	232299	6.73	3435914	99.52	16583	0.48	
2025	No.	%	No.	%	No.	%	No.	%	No.	%	3854969
7 Max	3500012	90.79	320551	8.32	32968	0.86	3853532	99.96	1437	0.04	
7 Sub-max	3263340	84.65	444698	11.54	129723	3.37	3837761	99.55	17208	0.45	
6 Max	3252580	84.37	554975	14.40	45965	1.19	3853519	99.96	1450	0.04	
6 Sub-max	2972719	77.11	609637	15.81	255328	6.62	3837684	99.55	17286	0.45	
2030	No.	%	No.	%	No.	%	No.	%	No.	%	4114818
7 Max	3739555	90.88	339619	8.25	34173	0.83	4113347	99.96	1471	0.04	
7 Sub-max	3487935	84.77	473063	11.50	136285	3.31	4097282	99.57	17537	0.43	
6 Max	3475716	84.47	589715	14.33	47903	1.16	4113334	99.96	1485	0.04	
6 Sub-max	3178202	77.24	648876	15.77	270128	6.57	4097206	99.57	17612	0.43	
2035	No.	%	No.	%	No.	%	No.	%	No.	%	4356378
7 Max	3963341	90.98	356558	8.19	34987	0.80	4354885	99.97	1492	0.03	
7 Sub-max	3698559	84.90	498131	11.44	141951	3.26	4338641	99.59	17737	0.41	
6 Max	3685194	84.59	620397	14.24	49280	1.13	4354871	99.97	1507	0.04	
6 Sub-max	3372057	77.41	683827	15.70	282680	6.49	4338564	99.59	17813	0.41	

Table 2 Estimated population 55 + years (Census 2016, projected 2025, 2030, 2035) within 60, 90 and 120 mins travel times of 6 and 7 service locations at max and sub-max travel speeds

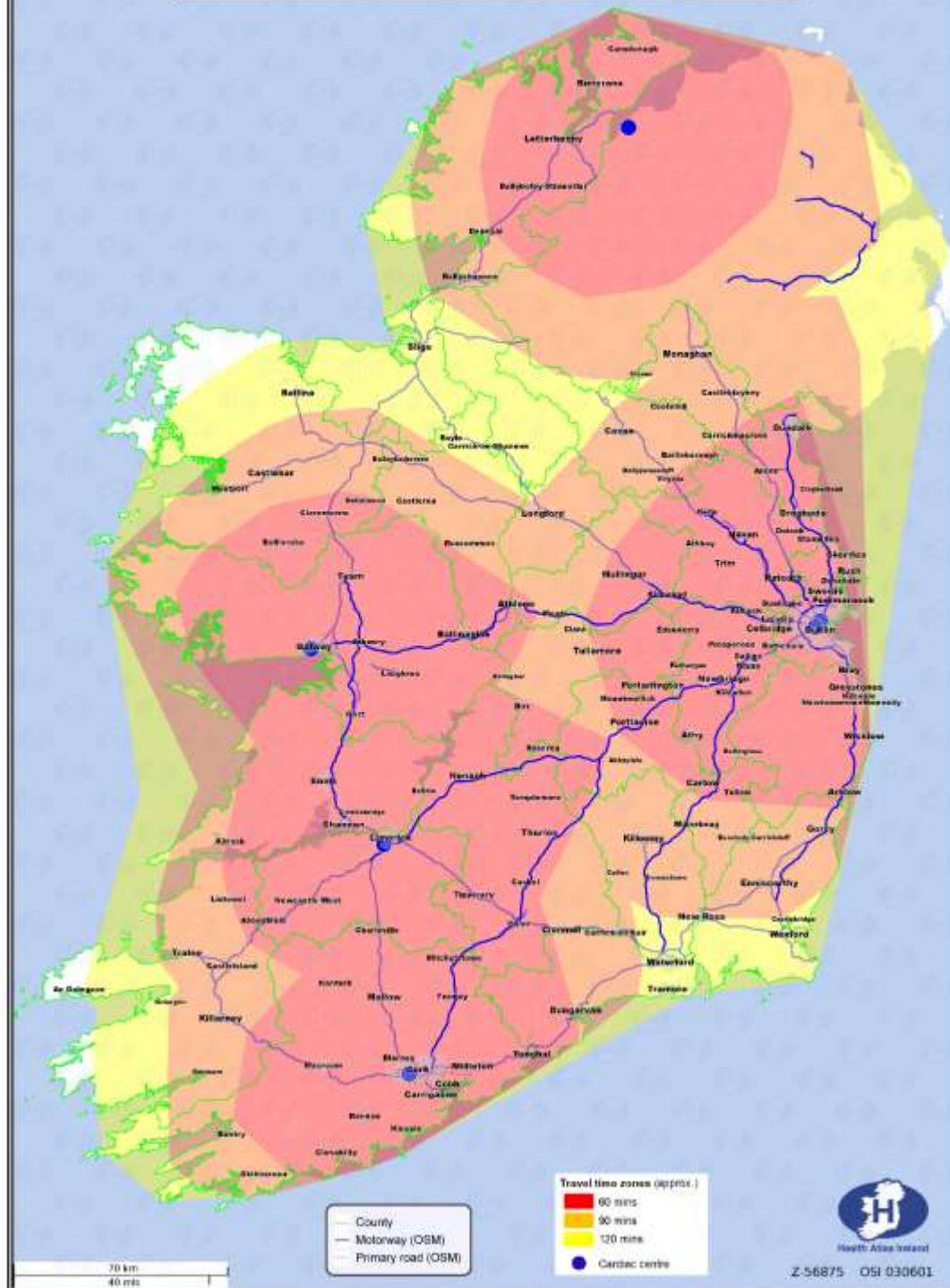
Year & scenarios	Inner zone 60 mins		Middle zone 90 mins		Outer zone 120 mins		All zones		Outside all zones		Total population 55+ years
2016	No.	%	No.	%	No.	%	No.	%	No.	%	1146525
7 Max	1015824	88.60	116013	10.12	14047	1.23	1145884	99.94	641	0.06	
7 Sub-max	932471	81.33	156427	13.64	49729	4.34	1138627	99.31	7898	0.69	
6 Max	935531	81.60	191403	16.69	18945	1.65	1145879	99.94	646	0.06	
6 Sub-max	838080	73.10	209872	18.31	90638	7.91	1138591	99.31	7934	0.69	
2025	No.	%	No.	%	No.	%	No.	%	No.	%	1435320
7 Max	1281097	89.26	137552	9.58	15943	1.11	1434592	99.95	728	0.05	
7 Sub-max	1180219	82.23	188675	13.15	57743	4.02	1426637	99.40	8683	0.60	
6 Max	1180285	82.23	232443	16.19	21859	1.52	1434587	99.95	734	0.05	
6 Sub-max	1061941	73.99	255846	17.82	108809	7.58	1426596	99.39	8724	0.61	
2030	No.	%	No.	%	No.	%	No.	%	No.	%	1625702
7 Max	1457668	89.66	150364	9.25	16904	1.04	1624937	99.95	765	0.05	
7 Sub-max	1346504	82.83	207599	12.77	62578	3.85	1616681	99.45	9021	0.55	
6 Max	1344512	82.70	257033	15.81	23385	1.44	1624930	99.95	772	0.05	
6 Sub-max	1213963	74.67	283010	17.41	119667	7.36	1616641	99.44	9061	0.56	
2035	No.	%	No.	%	No.	%	No.	%	No.	%	1825509
7 Max	1644915	90.11	162305	8.89	17503	0.96	1824723	99.96	786	0.04	
7 Sub-max	1523983	83.48	225562	12.36	66803	3.66	1816348	99.50	9161	0.50	
6 Max	1519908	83.26	280347	15.36	24461	1.34	1824715	99.96	793	0.04	
6 Sub-max	1377524	75.46	309028	16.93	129755	7.11	1816307	99.50	9201	0.50	



Cardiac Centres - 6 locations, sub-max speed travel zones V1

Indicative ambulance travel time zones - 60, 90, 120 minutes

Motorway & primary 90%, other 80% OSM road speeds. Analysis 181021

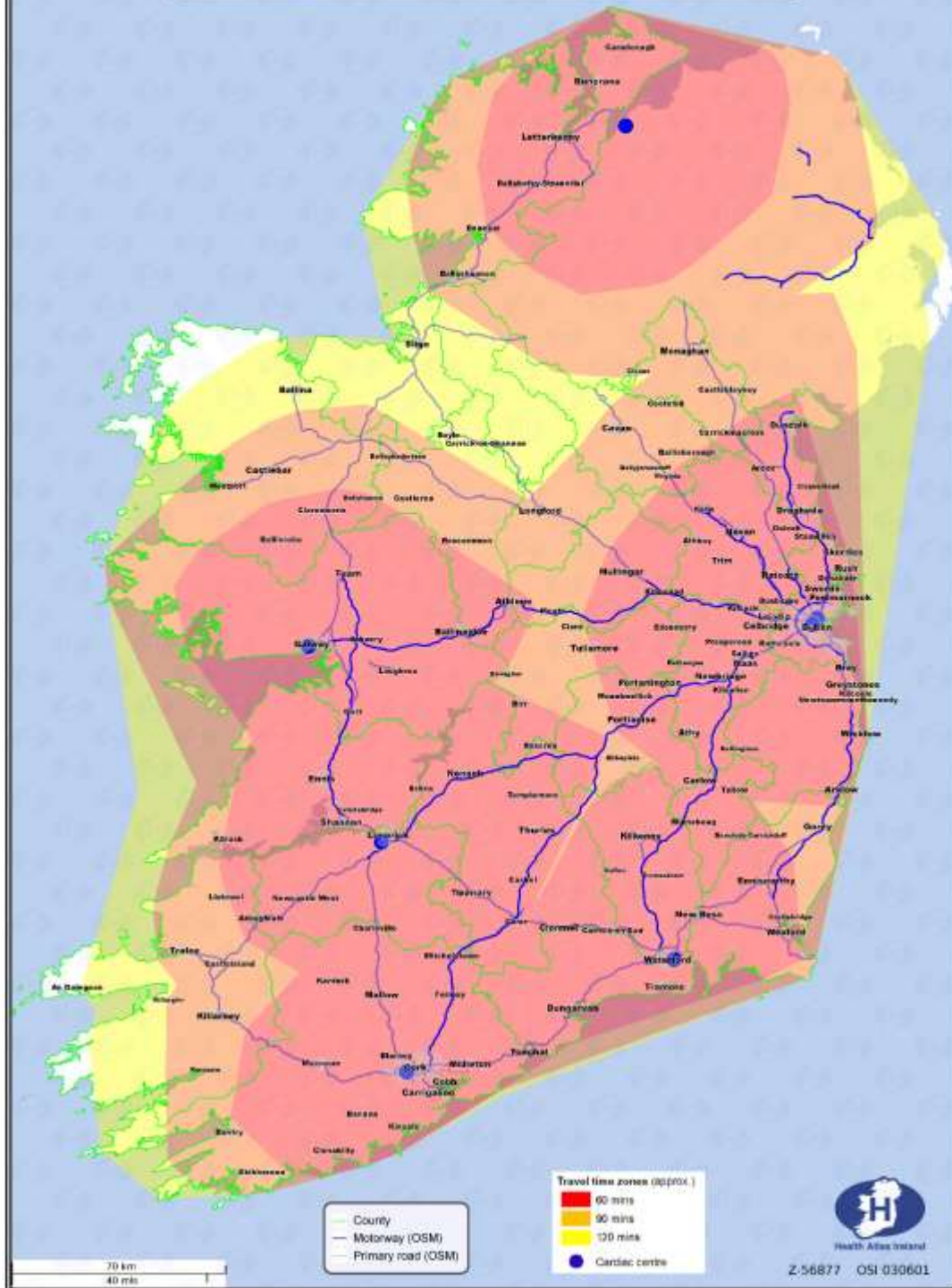




Cardiac Centres - 7 locations, sub-max speed travel zones V1

Indicative ambulance travel time zones - 60, 90, 120 minutes

Motorway & primary 90%, other 80% OSM road speeds. Analysis 181021



APPENDIX 2: IHAA GOVERNANCE COMMITTEE

Heartbeat was renamed the IHAA in 2019. Dr Ronan Margey was appointed Clinical Lead of the IHAA, and the IHAA Governance Committee was established with Dr Sean Fleming as Chairperson. Its membership comprises clinical experts, Public and Patient Interest (PPI) representatives, the Healthcare Pricing Office (HPO), senior accountable healthcare management, and research and specialist bodies.

MEMBERSHIP OF THE IHAA GOVERNANCE COMMITTEE

IHAA Governance Committee Attendance Record 2021				
Representative	Name	25.02.21	28.05.21	15.10.21
Clinical Expert- Consultant Cardiologist	Dr Gavin Blake	x	x	✓
Programme Manager National Heart Programme	Dr Regina Black	✓	x	✓
Research Expertise Cardiac Research Group, RCSI	Prof Robert Byrne	✓	x	x
Clinical Expert Irish Cardiac Society	Prof James Crowley	✓	✓	x
Healthcare Pricing Office	Jacqui Curley	✓	✓	✓
Clinical Expert Consultant Cardiologist	Dr Sean Fleming	Chair	Chair	Chair
Clinical Psychologist	Jonathan Gallagher	✓	✓	✓
Senior Accountable Healthcare Manager- Director of Nursing IEHG	Paul Gallagher	✓	x	✓
Healthcare Professional Expert Cardiac Rehabilitation	Stephen Giffney	n/a	✓	✓
Public Health Expertise	Siobhan Jennings	✓	✓	x
Clinical Expert Consultant Cardiologist	Dr Mark Kennedy	x	x	x
Clinical Expert Consultant Cardiologist	Dr Andrew Maree	x	✓	x
Clinical Lead for IHAA	Dr Ronan Margey	✓	✓	✓
National Ambulance Service - Lead	Siobhan Masterson	✓	✓	✓

Heartbeat Audit Assistant Manager	Yvonne McConnon	✓	✓	✓
Cardiovascular Programme Audit Manager	Joan McCormack	✓	✓	✓
Clinical Lead National Heart Programme	Prof Ken McDonald	✓	x	x
Research Expertise Consultant Cardiologist	Dr Eugene McFadden	✓	✓	✓
Patient and Public Interest Representative	Lucinda McNerney	✓	x	✓
Healthcare Professional Expert Audit Coordinator	Anne McShane	x	✓	✓
Clinical Director National Ambulance Service	Dr Cathal O'Donnell	✓	n/a	n/a
Patient and Public Interest Representative	Michael Ryan	✓	✓	x

The purpose of the IHAA Governance Committee is to oversee the national clinical audit by:

- shaping the strategic direction of the IHAA
- ensuring that the IHAA complies with all legal and statutory requirements, such as freedom of information and data protection
- overseeing compliance with key NOCA policies, e.g. the NOCA Monitoring and Escalation Policy
- providing assurance to the NOCA Governance Board on the identification and management of IHAA risks
- reviewing and agreeing the content of IHAA annual reports before forwarding reports to the NOCA Governance Board for review and sign-off
- monitoring staffing needs for the IHAA, both in NOCA and at hospital level, and supporting requests for staff as the service grows
- acting as an escalation point for subcommittees of the IHAA Governance Committee and for the IHAA Clinical Lead
- ensuring that the IHAA adheres to the highest standards of corporate and social responsibility. The Clinical Lead, supported by the NOCA Executive Team, has operational responsibility for implementing the IHAA.

APPENDIX 3: HEARTBEAT DATASET

Name	Short name	ID No.	Definition	Instructions for answering field	Codes and values
Previous MI	HISTORY_P REV_MI	1	Patient risk factor - Previous MI	Yes - Patient had at least one MI previously before this admission No - Patient has no history of a previous MI Unknown - Information missing	1. Yes, 2. No, 9. Unknown
Previous Angina	PREVIOUS_ ANGINA	2	Patient risk factor - Previous Angina	Yes - Patient has a history of angina and / or has been treated previously for angina by a physician. No - Patient has no history of diagnosed angina Unknown - Information missing	1. Yes, 2. No, 9. Unknown
Previous Peripheral Vascular Disease	PVD	3	Patient risk factor - Previous Peripheral Vascular Disease	Yes - History or evidence of aneurysm or occlusive peripheral vascular disease or carotid disease, including aortic aneurysm, previous aorto-iliac or peripheral vascular surgery, reduced or absent peripheral pulses and / or angiographic stenosis of more than 50%. No - Patient has no history of diagnosed PVD Unknown - Information missing	1. Yes, 2. No, 9. Unknown
Previous Cerebrovascular Disease	CEREBRO	4	Patient risk factor - Previous Peripheral Vascular Disease	Yes - Patient has a history of cerebrovascular accident (CVA) / stroke, as evidenced by a persistent neurological deficit due to ischaemia. No - Patient has no history of diagnosed CVA Unknown - Information missing	1. Yes, 2. No, 9. Unknown
Previous Chronic Renal Failure	CRF	5	Patient risk factor - Previous Chronic Renal failure	Yes - Patient has a history of chronic renal failure as documented in the medical records or documented by any one of the following: (a) Serum creatinine greater than 2.0 mg/dl or 200 umol/l in the past (b) On dialysis (c) Has had a renal transplantation / impairment No - Patient has no history of diagnosed chronic renal failure or impairment Unknown - Information missing	1. Yes, 2. No, 9. Unknown

Previous Chronic Lung Disease	LUNG_DISEASE	6	Patient risk factor - Previous Chronic Lung Disease	Yes - Patient has a history of chronic lung disease and/or has previously been treated for chronic lung disease by a physician.(includes asthma, COPD, emphysema etc.) No - Patient has no history of diagnosed chronic lung disease Unknown - Information missing	1. Yes, 2. No, 9. Unknown
Previous PCI (percutaneous coronary intervention)	PREV_PCI	7	Patient risk factor - Previous PCI	Yes - Patient has had a previous cardiac PCI of any type before the current admission.(e.g. balloon angioplasty, implantation of intra coronary stent or other catheter devices for treating coronary atheroma, atherectomy, laser angioplasty or other). No - Patient has no history of previous cardiac PCI procedure before this admission Unknown - Information missing	1. Yes, 2. No, 9. Unknown
Previous CABG (coronary artery bypass graft)	PREV_CABG	8	Patient risk factor - Previous CABG	Yes - Patient had coronary artery bypass graft (CABG) surgery done prior to this admission. No - Patient has no history of CABG procedure Unknown - Information missing	1. Yes, 2. No, 9. Unknown
Previous Other Heart Surgery	PREV_HEART_SURG	9	Patient risk factor - Previous Other Heart Surgery	Yes - Patient has had previous heart surgery other than CABG such as aortic/mitral valve replacement, repair, surgery post trauma, heart transplant etc No - Patient has no history of other heart surgeries. Unknown - Information missing	1. Yes, 2. No, 9. Unknown
Diabetes Mellitus	DIABETES	10	Patient risk factor - Diabetes Mellitus	3. Diabetes (oral medicine) is to be selected for those on oral medicine only. 4. Diabetes (insulin) will include those on insulin and those on both insulin and oral medications. Note: Any newly diagnose diabetic should be 2, 3 or 4.	1. Not Diabetic 2. Diabetes (Diet control) 3. Diabetes (oral meds) 4. Diabetes (insulin) 9. Unknown
Smoking Status	SMOK	11	Patient risk factor - Smoking	1. Patient has never smoked a tobacco product. 2. Patient has stopped smoking tobacco products greater than 30 days before this admission 3. Patient regularly smokes a tobacco product / products one or more times per day or has smoked in the 30 days prior to this admission 9. Information missing.	1. Never 2. Former 3. Current 9. Unknown
Previous Hypercholesterolemia	PREV_HYPERCHOL	12	Patient risk factor - Previous Hypercholesterolemia	1. Indicate if the patient has a documented history of hypercholesterolemia diagnosed and/or treated by a physician. 2. Patient has no history of diagnosed high cholesterol. 9. Information missing.	1. Yes, 2. No, 9. Unknown
Previous Hypertension	PREV_HYPERT	13	Patient risk factor - Previous Hypertension	1. Patient has a history of hypertension diagnosed and/or treated by a physician. 2. Patient has no history of diagnosed high blood pressure 9. Information missing.	1. Yes, 2. No, 9. Unknown

BMI	BMI	14	Patient risk factor - BMI	Locate BMI as recorded on cath lab documentation and assign BMI to the appropriate range: Underweight below 18.5 Normal weight 18.5-24.9 Pre-obesity 25-29.9 Obesity Class I 30-34.9 Obesity Class II 35-39.9 Obesity Class III above 40	1. Underweight below 18.5 2. Normal weight 18.5-24.9 3. Pre-obesity 25-29.9 4. Obesity Class I 30-34.9 5. Obesity Class II 35-39.9 6. Obesity Class III above 40
Source of Referral	REF_SOURCE	15	Arrival Information - How was the patient referred to the PPCI / PCI Centre	1. Patient's initial source of referral is Amb Service 2. Patient has presented to hospital by own transport 5. Patient already in hospital and developed STEMI 6. Inpatient transferred from a NON PCI hospital to a PCI/ PCI hospital 8. Other source of referral other than above (14C) 9. Information missing	1. Direct via Ambulance 2. Self-presentation 4. Transfer from Other hospital 5. Already inpatient in PCI/PPCI hospital 6. Inpatient transfer from other hospital 8. Other (please specify) 9. Unknown
Method of admissions ambulance	ADMISSION_METHOD_AMB	15a	Arrival Information - Admission Method (ambulance)	1. Ambulance delivery into cath lab directly. 2. Ambulance delivery into emergency dept. directly	1. Code STEMI to cath lab 2. Code STEMI to ED
Method of admissions ambulance other	ADMISSION_METHOD_OTHER_HOSP	15b	Arrival Information - Admission Method (other hospital)	1. Patient brought from other hospital to cath lab directly 2. Patient brought from other hospital to ED(for possible evaluation, stabilization) prior to cath lab	1. Other hospital to cath lab 2. Other hospital to ED/other

Source of Referral - other hospital	REF_SOURC E_OTHER_ HOSP	15c	Arrival Information - Source of Referral - other hospital	Select from hospital list	0000 Not Applicable 0941 Childrens Crumlin 0101 St Columcilles 0102 Naas General 0908 Mater Hospital 0910 SVUH 0925 Peamount Hospital 0955 Cappagh Orthopaedic 0940 Temple Street 0947 St Lukes Rathgar 0904 SJH Dublin 0108 Connolly Blanchardstown 0912 Michaels Dun Laoghaire 0950 RVEEH 0960 National Rehabilitation 0930 Coombe Hospital 0932 Rotunda Dublin 0931 National Maternity Hosp 1270 Tallaght Hospital 1762 Josephs Raheny 0954 Clontarf Orthopaedic 1001 Blackrock Hospice 0600 Waterford 0601 St Lukes KK 0605 Wexford 0602 Kilcreene 0607 Clonmel 0705 Finbarrs Cork 0704 Bantry 0913 Mercy Cork 0915 South Infirmary 0703 Mallow 0724 CUH 0726 Kerry 0301 Limerick Maternity 0300 Limerick 0302 Croom Limerick 0918 St Johns Limerick 0305 Ennis 0304 Nenagh 0803 Roscommon 0919 Portiuncula 0800 Galway 0802 Mayo 0801 Merlin Park 0203 Tullamore 0202 Mullingar 0201 Portlaoise 0500 Letterkenny 0501 Sligo 0922 Drogheda 0402 Cavan 0400 Louth County 0404 Monaghan 0403 Navan 8888 Other
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Arrival Information - Admission Method - other	REF_SOURCE_OTHER	15d	Arrival Information - Admission Method - other	Enter appropriate text source of referral – other	Enter text
STEMI Form	STEMI_FORM	15e	If transferred (4 or 6 selected for Q15) from another hospital, did a STEMI transfer form accompany the patient		1. Yes 2. No 3. Unknown
Date left first hospital	DATE_FIRST_LEAVE	15f	What date did the patient leave the first hospital for transfer to the PCIcentre		DD/MM/YYYY
Time left first hospital	TIME_FIRST_LEAVE	15g	What time did the patient leave the first hospital for transfer to the PCIcentre		HHMM
Helicopter transport	HELICOPTER	16	Used to state if helicopter used where patient came as Direct via Ambulance or transfer from other hospital		1. Yes 2. No
Aspirin pre-admission / admission (original Heartbeat Item)	ASPIRIN	17	Was the patient on aspirin pre-admission/admission	2. Do not enter 'No' if patient contraindicated 3. Allergy, unable to tolerate medication 9. Information missing	1 Yes 2 No 3 Contraindicated 9 Unknown
Other antiplatelet pre-admission / admission	OTHER_ANTI_PRE_AD_M	18	Was the patient on any other antiplatelet medication pre-admission/admission	2. Do not enter 'No' if patient contraindicated 3. Allergy, unable to tolerate medication 9. Information missing	1 Yes 2 No 3 Contraindicated 9 Unknown
Symptom onset date	SYMPTOM_ONSET_DATE	19	What date did symptoms that required call for assistance start	Enter as DD/MM/YYYY If none given leave blank.	DD/MM/YYYY

Symptom onset time	SYMPTOM_ONSET_TIME	20	What time did symptoms that required call for assistance start	Enter as HHMM. If none given leave blank.	HHMM
Call for help date	CALL_HELP_DATE	21	Date patient, relative or attendant called 999/112 for help or for self-presenters the ED time.	Enter as DD/MM/YYYY	DD/MM/YYYY
Call for help time	CALL_HELP_TIME	22	Time patient, relative or attendant called 999/112 for help or for self-presenters the ED time.	Enter as HHMM	HHMM
First positive ECG Date	POS_ECG_DATE	23	Date of first diagnostic (of STEMI)	Date of first diagnostic (of STEMI) ECG -no need to complete if First ECG is diagnostic of STEMI	DD/MM/YYYY
First positive ECG Time	POS_ECG_TIME	24	Time of first diagnostic (of STEMI)	Time of first diagnostic (of STEMI) ECG -no need to complete if First ECG is diagnostic of STEMI	HHMM
First positive ECG Location	POS_ECG_LOCATION	25	Where was the first positive ECG performed	1. 12 lead ECG performed by ambulance personnel 2. 12 lead ECG performed in ED 3. 12 lead ECG performed in GP office 8. 12 lead ECG performed other location such as hospital ward/CCU etc. 9. Information missing	1. Ambulance 2. Hospital ED 3. GP Practice 8 Other (please specify) 9. Unknown
First positive ECG Location-Other	POS_ECG_LOCATION_OTHER	26	Location of first positive ECG if not identified in 24.	Enter appropriate text for first positive ECG location (if not covered in previous field)	TEXT
ECG transmission (by ambulance service)	ECG_TRANSMISSION_AMBULANCE_SERVICE	27	Was the ECG transmitted via ECG machine (NOT via smartphone) to PPCI centre by the ambulance service.	1. If ECG transmitted via ECG machine (NOT via smart phone) to PPCI centre by the Ambulance service. If unsure select 'Unknown'. 9. Information missing	1. Yes 2. No 9. Unknown

Arrival at 1 st Hospital Date (original HB Item)	ARR_FIRST_HOSP_DATE	28	Date patient arrives at 1 st Hospital.	For patient whose arrival is first at a PPCI centre hospital enter same date/time as Arrival at PPCI Centre hospital date/time	DD/MM/YYYY
Arrival at 1st Hospital Time (original HB Item))	ARR_FIRST_HOSP_TIME	29	Time patient arrives at 1 st Hospital	For patient whose arrival is first at a PPCI centre hospital enter same date/time as Arrival at PPCI Centre hospital date/time	HHMM
Arrival at PPCI centre hospital Date	ARR_PPCI_CENTRE_DATE	30	Date patient arrives at PPCI centre Hospital (which may be via ED or the Cath Lab)	Where arrival is 1st at a PPCI centre hospital enter same date as Arrival at 1st hospital time.	DD/MM/YYYY
Arrival at PPCI centre hospital Time	ARR_PPCI_CENTRE_TIME	31	Time patient arrives at PPCI centre Hospital (which may be via ED or the Cath Lab)	Where arrival is 1st at a PPCI centre hospital enter same time as Arrival at 1st hospital time.	HHMM
Patient status on admission	STATUS_ON_ADMISSION	32	What was the patient status on admission	Option 2 'Cardiogenic Shock' the patient presented with cardiogenic shock before the PCI procedure requiring inotropes, intra-aortic balloon pump or CPR to support circulation. <i>Information missing</i>	1. Stable 2. Cardiogenic shock 3. Resuscitated Arrest 4. Cardiac Arrest & died 8. Other 9. Unknown
Patient status on admission - Other	STATUS_ON_ADMISSION_OTHER	33	What was the patient status on admission	Enter status of patient if not identifiable in 31	Text
Contraindicated to reperfusion therapy	REPER_THErapy_CONTRA	34	Was there a contraindication to reperfusion therapy	When YES is selected the patient received no primary reperfusion therapy such as thrombolysis or primary PCI intervention. A reason for this is selected in field 34 (mandatory field). When NO selected then the patient will have potential primary reperfusion therapy such as thrombolysis or primary PCI intervention (PPCI).	1. Yes 2. No

Contraindication to reperfusion therapy reason - (Core original HB Item)	REPER_CONTRA	35	What was the contraindication to reperfusion therapy	If Reperfusion Therapy is given then this Data Field should not be completed Option 1 'Presented Too Late'; Symptoms ≥ 12 hours to call for help/presented to hospital needs to be a clinical decision of the hospital. If reason is 'other' then enter appropriate text in area provided	1. Presented too late 2. Recent surgery 3. History of bleeding 4. Recent CVA 5. Drug contraindication 8. Other (please specify) 9. Unknown
Contraindication to reperfusion therapy reason – other (Core original Heartbeat Item)	REPER_CONTRA_OTHER	36	What was the contraindication to reperfusion therapy	Enter appropriate text for contraindication to reperfusion therapy reason (if not covered in field 34)	Text
Reperfusion therapy type (Core original Heartbeat Item)	REPER_THERAPY_TYPE	37	Type of reperfusion therapy received	Thrombolysis received in the field, GP office Thrombolysis received in the hospital, any department *Primary coronary intervention performed (no thrombolysis prior to procedure) Option 7 'None' is filled when the coronary anatomy is found to be normal i.e. non obstructive CAD (such as lesion ≤ 50%)	1.Pre-hosp Thrombolysis 2.Hospital Thrombolysis 3. Primary PCI 7. None
Reperfusion therapy Date (original HB Item)	REPER_THERAPY_DATE	38	Date of starting thrombolytic or PCI-mediated reperfusion using a guide wire to cross the occlusion. If none given leave blank. Not to be used for rescue PCI of for a post thrombolysis angiogram/PCI.		DD/MM/YYYY
Reperfusion therapy Time (original HB Item)	REPER_THERAPY_TIME	39	Time of starting thrombolytic or PCI-mediated reperfusion using a guide wire to cross the occlusion. If none given leave blank. Not to be used for rescue PCI of for a post thrombolysis angiogram/PCI.		HHMM
Was angiogram performed?	ANGIOGRAM_PERFORMED	40	Was a coronary angiogram performed		1. Yes 2. No

Angiogram performed as part of?	ANGIOGRAM_PART_OF	41	What is the reason the angiogram was performed; as a primary PCI, continued symptoms in failed thrombolysis, or a routine procedure after STEMI and in those presenting too late	1. Non thrombolysed patients undergoing primary PCI as treatment of acute MI 2. Thrombolysed patients with ongoing symptoms and ECG changes requiring urgent reperfusion (failed thrombolysis). 3. Routine angiogram on STEMI patients including those thrombolysed without ongoing symptoms and late presentation STEMI	1. Primary PCI 2. Rescue PCI 3. Routine angiogram/PCI
Outcome of angiogram/PCI	ANGIOGRAM_OUTCOME	42	What was the outcome of the angiogram/PCI	1. Achieving TIMI flow 3 or greater 2. Unable to cross with wire or balloon or final TIMI 0-2 flow 3. Patient deceased during or immediately following procedure. 4. Angiogram shows non obstructive CAD with TIMI 3 flow 5. Angiogram shows need for a CABG urgent or elective. 9. Missing information	1. Successful PCI 2. Unsuccessful PCI (incomplete) 3. Unsuccessful PCI (patient deceased) 4. PCI not required 5. CABG 6. Other 9. Unknown
Percutaneous Arterial Access	PERCUTANEOUS_ARTERIAL_ACCESS	43	Location of arterial access	1. Arterial access via Lt or Rt groin 2. Arterial access via Lt or Rt arm 3. Arterial access via Lt or Rt wrist	1. Femoral 2. Brachial 3. Radial
Late reperfusion therapy (thrombolysis or PPCI)	REPERFUSION_LATE	44	Was Reperfusion therapy delivered outside the target times of <30min 1st door to needle or < 120 mins 1st Hospital arrival (or first diagnostic ECG if pre-hospital) to PCI (wire cross) for PPCI.	Late reperfusion therapy is either > 30 mins 1st Hospital arrival to needle time for thrombolysis or > 120 mins 1st Hospital arrival (or first diagnostic ECG if pre-hospital) to PCI (balloon, stent or extraction catheter) for PPCI.	1. Yes 2. No
Late Reperfusion therapy reason (if RT outside targets) (Core original Heartbeat Item)	REPERFUSION_LATE_REASON	45	What was the reason why Reperfusion therapy was delivered outside the target times of < 30min 1st door to needle or < 120 mins 1st Hospital arrival (or first diagnostic ECG if pre-	Late reperfusion therapy is either > 30 mins 1st Hospital arrival to needle time for thrombolysis or > 120 mins 1st Hospital arrival (or first diagnostic ECG if pre-hospital) to PCI (balloon, stent or extraction catheter) for PPCI. If reason is other then enter appropriate text in area provided.	1. Delay in triage 2. Delay in ECG diagnosis 3. Hypertension 4. Evolving STEMI 5. Delay in transport 6. Delay in cath lab activation 8. Other (please specify) 9. Unknown

			hospital) to PCI (wire cross) for PPCI.		
Late Reperfusion therapy reason – other (Core original Heartbeat Item)	REPER_LATE_OTHER	46	What was the other reason reperfusion therapy was delivered outside targets listed if other is selected in 44	Enter appropriate text for late reperfusion reason (if not covered in reason options)	Text

Discharge diagnosis	DIS_DIAG	47	What was the discharge diagnosis	<p>1. STEMI: There will normally be a history consistent with the diagnosis. The diagnosis requires the presence of cardiographic changes of ST elevation consistent with infarction of ≥ 2 mm in contiguous chest leads and/or ST elevation of ≥ 1 mm in 2 or more standard leads. (New LBBB is included; although ST elevation is usually apparent in the presence of LBBB) [MINAP]</p> <p>2. NSTEMI There will normally be a history consistent with the diagnosis. In NSTEMI the ischemia is severe enough to cause sufficient myocardial injury evidence of ST segment and /or T wave changes (e.g. ST segment depression or transient elevation or new T wave inversion).</p> <p>The ischemia is severe enough to cause sufficient myocardial damage to release detectable quantities of a marker of myocardial injury. Note; an elevation in troponin or CK/CKMB may not be detectable for up to 12 hours after presentation (ESC)</p> <p>3. Unstable angina is defined as angina pectoris (or equivalent type of ischaemic discomfort) with any 1 of the 3 following features:</p> <ol style="list-style-type: none"> Angina occurring at rest and prolonged, usually greater than 20 minutes New-onset angina of at least CCS classification III severity Recent acceleration of angina reflected by an increase in severity of at least 1 CCS class to at least CCS class III. There must be no biochemical evidence of myocardial necrosis. [ACC] <p>4. Inflammatory disease of the pericardium (a fibrous sac surrounding heart).</p> <p>5. Inflammatory disease of the myocardium (heart muscle).</p> <p>6. Non ischaemic Cardiomyopathy also called apical ballooning syndrome; characterized by a sudden temporary weakening of the left ventricle with ventricular apical akinesis (commonly caused by severe stress).</p> <p>7. Chest pain that resembles angina but is non cardiac in origin after workup has excluded a cardiac cause.</p> <p>8 Other Non ACS diagnosis</p> <p>9. Information missing</p>	<p>1. STEMI</p> <p>2. NSTEMI</p> <p>3. Unstable Angina</p> <p>4. Pericarditis</p> <p>5. Myocarditis</p> <p>6. Takosubo</p> <p>7. Non Cardiac Chest Pain</p> <p>8. Other (please specify)</p> <p>9. Unknown</p>
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Discharge diagnosis- Other	DIS_DIAG_ OTHER	48	Diagnosis on discharge if 'other' selected in 46.	Enter appropriate text for discharge diagnosis (if not covered in previous field)	TEXT
LVF assessment	LVF	49	Was the LVF (Ejection Fraction) assessed while in hospital	Select one	1. Yes 2. No 3. Unknown
LVF Assessment method	LVF_ASSES SED	49a	If yes, how was the LVF assessed	Select one	1. Angiogram 2. Echocardiogram 3. Other
What is the EF	LVF_EF	49b	If yes, what is the EF from the LVF assessed	Select one	1. Normal (>50%) 2. Slightly reduced (41-50%) 3. Moderately reduced (31-40%) 4. Severely reduced (<30%) 9. Unknown
Culprit lesion	PRIM_CON _VESS	50	What was the primary coronary vessel treated during angiogram	Select one	0. Not applicable (as of 2023) 1. left anterior descending artery 2. Circumflex coronary artery 3. Right coronary artery 4. Left main coronary artery +/- category 1 or 2 5. Bypass graft
Heart rate on arrival to cath lab	CATH_HB_ RATE_NUM BER	51	What was the patients heart rate on arrival at the cath lab	Record heart rate in a number of beats per minute - range 0-300	Number
Systolic BP on arrival at the cath lab	SYS_BP_NU MBER	52	What was the systolic BP on arrival at the cath lab	Record systolic BP range 0-250	Number
Serum creatinine value	SERUM_NU MBER	53	What is the serum creatinine value	Record value in mmol/lit - range 40-400	Number
Congestive heart failure	EV_CONG_ HF	54	Was there any evidence of congestive heart failure in the cath lab	Select one. Killip class	1 No 2 Pulmonary crackles with elevated JVP 3 Acute pulmonary oedema 4 Cardiogenic shock

Troponin elevation	TROP	55	Was the Troponin I/T elevated	Select one	1. Yes 2. No 3. Unknown
Infarct type	INFARCT_T YPE	56	What is the location of the infarct causing the STEMI	Select one	1 Anterior/Apical STEMI 2 Anterolateral STEMI 3 Lateral STEMI 4 Inferior STEMI 5 Inferolateral STEMI 6 Inferoposterolateral STEMI 7 True Posterior STEMI 9 Unknown
Non culprit lesion	NON_CULP	57	Non culprit vessel intervention during hospital admission	Select one	1. Yes 2. No 9. Unknown
Bleeding (following any intervention)	BLEEDING	58	Did the patient have a bleeding episode after any intervention.	2. Of any severity. Should ideally be confirmed by scanning. This is also known as a haemorrhagic stroke. 3. Of any severity. Should ideally be confirmed by scanning 4. From any site except 2 and 3	1. None 2. Intracranial bleed 3. Retroperitoneal haemorrhage 4. Any bleed with Hb fall >5g 5. Any bleed with Hb fall > 3g and < 5g 6. Any bleed with Hb fall <3g 9. Unknown
Stroke during hospital stay	STROKE_EX_ HAEM	59	Did the patient have a stroke during the hospital stay?	1. The patient was diagnosed as having a stroke during hospital stay, as evidenced by persistent loss of neurological function caused by an ischaemic event. (also known as ischaemic stroke). 2. The patient was not diagnosed as having a stroke 3. The patient was diagnosed as having an intracranial bleed (ideally confirmed by scanning) – also known as a haemorrhagic stroke. 9. Information missing.	1. Yes - Ischaemic 2. No 3. Yes - Haemorrhagic 9. Unknown

Hospital of discharge (Core Heartbeat Item)	DISCHARGE _HOSP	60	Which hospital was the patient discharged from	Select from hospital list	0000 Not Applicable 0941 Childrens Crumlin 0101 St Columcilles 0102 Naas General 0908 Mater Hospital 0910 SVUH 0925 Peamount Hospital 0955 Cappagh Orthopaedic 0940 Temple Street 0947 St Lukes Rathgar 0904 SJH Dublin 0108 Connolly Blanchardstown 0912 Michaels Dun Laoghaire 0950 RVEEH 0960 National Rehabilitation 0930 Coombe Hospital 0932 Rotunda Dublin 0931 National Maternity Hosp 1270 Tallaght Hospital 1762 Josephs Raheny 0954 Clontarf Orthopaedic 1001 Blackrock Hospice 0600 Waterford 0601 St Lukes KK 0605 Wexford 0602 Kilcreene 0607 Clonmel 0705 Finbarrs Cork 0704 Bantry 0913 Mercy Cork 0915 South Infirmary 0703 Mallow 0724 CUH 0726 Kerry 0301 Limerick Maternity 0300 Limerick 0302 Croom Limerick 0918 St Johns Limerick 0305 Ennis 0304 Nenagh 0803 Roscommon 0919 Portiuncula 0800 Galway 0802 Mayo 0801 Merlin Park 0203 Tullamore 0202 Mullingar 0201 Portlaoise 0500 Letterkenny 0501 Sligo 0922 Drogheda 0402 Cavan 0400 Louth County 0404 Monaghan 0403 Navan 8888 Other
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Survival status on discharge home (Core Heartbeat Item)	SURVIVAL_STATUS_DISS	61	Was the patient dead or alive on discharge		1. Alive 2. Dead 9. Unknown
Aspirin on discharge (Core original Heartbeat Item)	ASP_DISCHARGE	62	Was the patient discharged on aspirin	2. Do not enter 'No' if patient contraindicated 3. Allergy, unable to tolerate medication 9. Information missing	1. Yes 2. No 3. Contraindicated 9. Unknown
Other Anti-platelet therapy on discharge	OTHER_ANTI_PLAT	63	Was the patient on another anti-platelet treatment on discharge.	2. Do not enter 'No' if patient contraindicated 3. Allergy, unable to tolerate medication 9. Information missing	1. Yes 2. No 3. Contraindicated 9. Unknown
Beta Blocker on discharge (Core original Heartbeat Item)	BETA_DISCHARGE	64	Was the patient on a betablocker on discharge.	2. Do not enter 'No' if patient contraindicated 3. Allergy, unable to tolerate medication 9. Information missing	1. Yes 2. No 3. Contraindicated 9. Unknown
Statin on discharge (Core original Heartbeat Item)	SATIN_DISCHARGE	65	Was the patient on a statin on discharge.	2. Do not enter 'No' if patient contraindicated 3. Allergy, unable to tolerate medication 9. Information missing	1. Yes 2. No 3. Contraindicated 9. Unknown
ACEI or ARB on discharge (Core original Heartbeat Item)	ACEI_ARB_DIS	66	Was the patient on an ACEI or ARB on discharge.	2. Do not enter 'No' if patient contraindicated 3. Allergy, unable to tolerate medication 9. Information missing	1. Yes 2. No 3. Contraindicated 9. Unknown
Smoking Cessation Counseling (for smokers) (Core original Heartbeat Item)	SMOKING_CESSATION	67	For patients who are smokers was smoking cessation provided.	1. Patient is a current smoker and has received smoking cessation counseling. 2. Do not enter this if patient is a non smoker 3. Patient has never smoked or is a former smoker 4. Do not enter this if patient is a non smoker 9. Information missing	1. Yes 2. No-patient declined 3. Non-smoker 4. No-reason 9. Unknown
Referral to Cardiac Rehabilitation (CR) Phase 3	REF_CARDIAC_REHAB	68	Was the patient referred to cardiac rehabilitation.	1. This field refers to a referral made by physician in clinical notes 9. Information	1. Yes 2. No - patient declined 3. No-due to co-morbidity 4. No reason 9. Unknown

Hospital for CR	REF_CARDI AC_REHAB _HOSP	69	What hospital was the patient referred to for cardiac rehabilitation	Select from hospital list	0000 Not Applicable 0941 Childrens Crumlin 0101 St Columcilles 0102 Naas General 0908 Mater Hospital 0910 SVUH 0925 Peamount Hospital 0955 Cappagh Orthopaedic 0940 Temple Street 0947 St Lukes Rathgar 0904 SJH Dublin 0108 Connolly Blanchardstown 0912 Michaels Dun Laoghaire 0950 RVEEH 0960 National Rehabilitation 0930 Coombe Hospital 0932 Rotunda Dublin 0931 National Maternity Hosp 1270 Tallaght Hospital 1762 Josephs Raheny 0954 Clontarf Orthopaedic 1001 Blackrock Hospice 0600 Waterford 0601 St Lukes KK 0605 Wexford 0602 Kilcreene 0607 Clonmel 0705 Finbarrs Cork 0704 Bantry 0913 Mercy Cork 0915 South Infirmary 0703 Mallow 0724 CUH 0726 Kerry 0301 Limerick Maternity 0300 Limerick 0302 Croom Limerick 0918 St Johns Limerick 0305 Ennis 0304 Nenagh 0803 Roscommon 0919 Portiuncula 0800 Galway 0802 Mayo 0801 Merlin Park 0203 Tullamore 0202 Mullingar 0201 Portlaoise 0500 Letterkenny 0501 Sligo 0922 Drogheda 0402 Cavan 0400 Louth County 0404 Monaghan 0403 Navan 8888 Other
Date of 1st phase 3 CR appointment	DATE_FIR T_PHASE3_ CR	70	What was the date of 1st phase 3 CR appointment	Enter as dd mm yyyy	DD/MM/YYYY
Survival status at 30 days post MI	SURVIVAL_ STATUS_30 _DAYS	71	What is the survival status of the patient 30 days after arrival at first hospital	Survival status 30 days after MI is survival status after 30 days from arrival at 1st hospital. 9. Information missing	1. Alive 2. Dead 9. Unknown
Cause of death	CAUSE_DE ATH	72	If the patient died, what was the cause of death	Patient deceased with documented CVD (AMI CCF etc.)	1. CVD 2. Non CVD 9. Unknown
Comment	CASE_COM MENT	73	Optional text box to include any unusual cases or events associated with the patient episode.	Optional text box to include any unusual cases or events associated with the patient episode.	TEXT

APPENDIX 4: INTERNATIONAL QUALITY INDICATORS

International performance indicators and targets for ST elevation myocardial infarction (STEMI) care vary both in terms of what is suggested to be reported on and what is considered acceptable, although some commonality can be seen across most indicators and targets. The following are some of the main international indicators and/or targets, mainly for reperfusion therapy.

1. European Society of Cardiology (ESC) STEMI Guidelines 2012 (Steg et al., 2012):

Quality targets:

- First medical contact (FMC)* to first electrocardiogram (ECG): 10 minutes
- FMC* to reperfusion therapy:-
 - for fibrinolysis: 30 minutes
 - for primary percutaneous coronary intervention (PCI): 90 minutes (60 minutes if the patient presents within 120 minutes of symptom onset or directly to a PCI-capable hospital).

*FMC is defined as the point at which the patient is either initially assessed by a paramedic or physician or other medical personnel in the pre-hospital setting, or at which the patient arrives at the hospital emergency department.

2. Myocardial Ischaemia National Audit Project 2012 report (MINAP, 2016) (United Kingdom):

- 'call to balloon' (CTB) time: audit standard – up to 150 minutes
- 'door to balloon' (DTB) time: audit standard – up to 90 minutes
- 'call to needle' (CTN) time: audit standard – up to 60 minutes
- 'door to needle' (DTN) time: audit standard – up to 30 minutes

3. Danish national indicators:

- primary PCI as a national reperfusion strategy
- 100% and accordingly no fibrinolysis = pre-hospital diagnosis in 90% of cases
- field triage in 60% of those diagnosed in a pre-hospital setting
- DTB time of 30 minutes.

4. 2013 American College of Cardiology Foundation (ACCF)/American Heart Association (AHA) Guideline for the Management of STEMI (O'Gara et al., 2013):

- for direct emergency medical service (EMS) transport: FMC-to-device time system goal of 90 minutes or less
- for non-PCI to primary PCI centre transport: FMC-to-device time system goal of 120 minutes or less
- when indicated or chosen as the primary reperfusion strategy, fibrinolytic therapy should be administered within 30 minutes of hospital arrival.

5. Institute for Healthcare Improvement (IHI) (United States of America) method (2008):

- thrombolytic agent received within 30 minutes of hospital arrival; goal: 100% of patients
- PCI received within 90 minutes of hospital arrival; goal: 100% of patients.

6. Safer Healthcare Now (SHN) (Canada) method:

- thrombolytic agent received within 30 minutes of hospital arrival; goal: 85% of patients
- PCI received within 90 minutes of hospital arrival; goal: 90% of patients.

7. Canadian Cardiovascular Outcomes Research Team (CCORT) guidelines (Tu et al., 2008):

- primary PCI within 90 minutes of hospital arrival* and within 120 minutes of call for help
- thrombolysis within 30 minutes of hospital arrival*
- ECG within 10 minutes of hospital arrival.*

* Triage time or registration time – whichever comes first.

8. Australia/New Zealand guidelines (Aroney et al., 2006) (with 2011 Addendum):

- primary PCI within 60 minutes of presentation if patient presents within 1 hour of symptom onset
- primary PCI within 90 minutes of presentation if patient presents more than 1 hour after symptom onset
- if patient presents to facility without catheterisation laboratory (cath lab) (and symptoms between 3 and 12 hours), appropriate to transfer for primary PCI if primary PCI can be done within 120 minutes (including transport time)
- thrombolysis should be considered where there are major delays (>30 minutes) to hospitalisation
- ECG should, where possible, be done pre-hospital and transmitted to hospital
- ECG should otherwise be done within 5 minutes of hospital arrival.

APPENDIX 5: METADATA FOR KEY QUALITY INDICATORS

IHAA DASHBOARD INFORMATION ON HOW THE KEY QUALITY INDICATORS (KQIs) ARE CALCULATED

Defining the cohort for analysis

Data on all cases submitted to the Heartbeat portal are sent to NOCA from the Healthcare Pricing Office (HPO) every month. Before the data analyst reports on the data, all patients who do not have a discharge diagnosis of STEMI and patients aged 16 years and under are excluded.

This now forms the dataset to report on the 9 KQIs:

KQI 1: Percentage of eligible patients with a STEMI who were offered reperfusion

Out of all the patients, what was the percentage who were offered reperfusion therapy (primary PCI or thrombolysis).

Analysis:

The total number of patients divided by the total number of patients who were offered reperfusion – expressed as a percentage.

Cases were excluded if:

- Patient was contraindicated to reperfusion therapy

KQI 2: Percentage of patients with a STEMI who had timely primary PCI – arrived directly to a Primary PCI centre.

Out of all the patients who had primary PCI and were admitted to a Primary PCI centre directly, what was the percentage who received a timely primary PCI?

Analysis:

The total number of patients who had primary PCI and were admitted to a Primary PCI centre directly and received timely primary PCI divided by the total number of patients who had primary PCI and were admitted to a Primary PCI directly – expressed as a percentage.

- Definition of “arrived directly” – patient’s initial source of referral is direct by ambulance; patient has presented to the Primary PCI centre by own transport; patient already in a hospital that is a Primary PCI centre and developed STEMI
- Timely reperfusion is analysed by calculating difference in minutes between date and time of first positive ECG and date and time of PCI/wire cross. If the difference is 120 minutes or less, it is considered timely reperfusion

Cases were included if:

- Patient’s initial source of referral is direct by ambulance ; patient has presented to a PCI centre by own transport; patient already in a hospital that is a Primary PCI centre and developed STEMI
- Patient received Primary PCI

Cases were excluded if:

- Patient was contraindicated to reperfusion therapy
- If the date/time of first positive ECG and/or PCI/wire cross date/time was not recorded
- If the date/time of positive ECG was recorded as after the PCI/wire cross date/time. This indicates that wrong date was recorded

KQI 3: Percentage of patients with STEMI who had timely primary PCI – transferred to a Primary PCI centre

Out of all the patients who had primary PCI and were transferred from another hospital to a Primary PCI centre, what was the percentage who received a timely primary PCI?

Analysis:

The total number of patients who had primary PCI and were transferred from another hospital to a Primary PCI centre and received timely primary PCI divided by the total number of patients who had primary PCI and were transferred from another hospital to a Primary PCI centre – expressed as a percentage.

- Definition of “transferred” – patient was transferred from another hospital or was an inpatient in another hospital and was transferred to a Primary PCI centre.
- Timely reperfusion is analysed by calculating difference in minutes between date and time of first positive ECG and date and time of PCI/wire cross. If the difference is 120 minutes or less, it is considered timely reperfusion

Cases were included if:

- Patient’s initial source of referral is a transfer; transferred from other hospital or an inpatient in another hospital
- Patient received Primary PCI

Cases were excluded if:

- Patient was contraindicated to reperfusion therapy
- If the date/time of first positive ECG and/or PCI/wire cross date/time was not recorded
- If the date/time of positive ECG was recorded as after the PCI/wire cross date/time. This indicates that wrong date was recorded

KQI 4: Percentage of patients with STEMI who had radial access for Primary PCI

Out of all the patients who received Primary PCI, what was the percentage who had the procedure by radial access?

Analysis:

The total number of patients who received Primary PCI with radial access divided by total number of patients who received Primary PCI – expressed as a percentage.

Cases were included if:

- Patient received Primary PCI

Cases were excluded if:

- Patient was contraindicated to reperfusion therapy

KQI 5: Percentage of patients with a STEMI who had an appropriate secondary prevention discharge bundle prescribed.

Out of all the patients, what was the percentage who had an appropriate secondary prevention discharge bundle prescribed.

Analysis:

The total number of patients who had an appropriate secondary prevention discharge bundle prescribed divided by total number of patients – expressed as a percentage.

- Secondary prevention discharge bundle is defined as: if on discharge, the patient was prescribed or were contraindicated to each of the following treatments: ACEI or ARB, betablocker, aspirin, statin, another anti-platelet

Cases were excluded if:

- Patients were dead on discharge from the hospital

KQI 6: Percentage of patients with a STEMI who smoke and were offered smoking cessation advice

Out of all the patients who smoked prior to admission to hospital, what was the percentage who were offered smoking cessation advice?

Analysis:

The total number of patients who smoke and who were offered smoking cessation advice divided by total number of patients who smoke – expressed as a percentage.

Cases were included if:

- Patients were smoking prior to admission to hospital

KQI 7: Percentage of patients with a STEMI referred for cardiac rehabilitation phase 3

Out of all the patients, what was the percentage who were referred for cardiac rehabilitation phase 3.

Analysis:

The total number of patients who were referred for cardiac rehabilitation phase 3 divided by total number of patients – expressed as a percentage.

Cases were excluded if:

- Patients were dead on discharge from the hospital

KQI 8: Percentage completeness of survival status at 30 days

Out of all the patients, what was the percentage who had 30 day survival information recorded?

Analysis:

The total number of patients who had 30 day survival recorded (including those who died while in hospital) divided by total number of patients – expressed as a percentage.

KQI 9: Percentage of patients who have cardiac rehabilitation phase 3 date recorded

Out of all the patients referred for cardiac rehabilitation phase 3, what was the percentage who had the date of cardiac rehabilitation phase 3 recorded.

Analysis:

The total number of patients who had date of referred for cardiac rehabilitation phase 3 recorded divided by total number of patients who were referred for cardiac rehabilitation phase 3 – expressed as a percentage.

Cases were included if:

- Patients were referred for cardiac rehabilitation phase 3

Cases were excluded if:

- Patients were dead on discharge from the hospital

APPENDIX 6: FREQUENCY TABLES

FIGURE Error! No text of specified style in document..1: PROPORTION OF HEARTBEAT CASE SUBMISSIONS, BY PERCUTANEOUS CORONARY INTERVENTION CENTRE, 2021 (N=1742)

	N	%
Mater Misericordiae University Hospital	444	25%
St James's Hospital	416	24%
Cork University Hospital	239	14%
University Hospital Galway	231	13%
University Hospital Limerick	225	13%
University Hospital Waterford	70	4%
Letterkenny University Hospital	61	4%
Beaumont Hospital	20	1%
St Vincent's University Hospital	19	1%
Tallaght University Hospital	17	1%
Total	1742	100%

FIGURE Error! No text of specified style in document..2: PERCENTAGE OF ST ELEVATION MYOCARDIAL INFARCTION CASES, BY SEX AND AGE GROUP (N=1491)

	Male		Female		Total	
	N	%	N	%	N	%
≤40	37	3.2%	7	2.1%	44	3.0%
41–64	659	57.1%	133	39%	792	53.1%
65–79	378	32.8%	134	39.8%	512	34.3%
≥80	80	6.9%	63	18.7%	143	9.6%
Total	1154	100.0%	337	100.0%	1491	100.0%

FIGURE Error! No text of specified style in document..3: PRIOR CARDIOVASCULAR DISEASE AND MAJOR COMORBIDITIES IN PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION, BY SEX

		Male		Female		Total	
		N	%	N	%	N	%
Previous MI	Yes	120	11%	28	9%	148	10.2%
	No	1010	89%	300	91%	1310	89.8%
	Total	1130	100%	328	100%	1458	100.0%
Previous angina	Yes	138	12%	43	13%	181	12.4%
	No	994	88%	289	87%	1283	87.6%
	Total	1132	100%	332	100%	1464	100.0%
Previous peripheral vascular disease	Yes	42	4%	9	3%	51	3.5%
	No	1097	96%	325	97%	1422	96.5%
	Total	1139	100%	334	100%	1473	100.0%
Previous cerebrovascular disease	Yes	35	3%	12	4%	47	3.2%
	No	1099	97%	319	96%	1418	96.8%
	Total	1134	100%	331	100%	1465	100.0%

Previous chronic renal failure	Yes	40	4%	13	4%	53	3.6%
	No	1093	96%	319	96%	1412	96.4%
	Total	1133	100%	332	100%	1465	100.0%
Previous chronic lung disease	Yes	67	6%	33	10%	100	6.8%
	No	1066	94%	300	90%	1366	93.2%
	Total	1133	100%	333	100%	1466	100.0%
Previous PCI	Yes	137	12%	37	11%	174	11.8%
	No	1004	88%	298	89%	1302	88.2%
	Total	1141	100%	335	100%	1476	100.0%
Previous coronary artery bypass graft	Yes	*	*	~	*	31	2.1%
	No	*	*	*	*	1444	97.9%
	Total	1142	100%	333	100%	1475	100.0%
Previous other heart surgery	Yes	~	*	~	*	7	0.5%
	No	*	*	*	*	1469	99.5%
	Total	1142	100%	334	100%	1476	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..4: PROPORTION OF PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION WITH PRIOR CORONARY HEART DISEASE, BY SEX AND AGE GROUP (N=1491)

		Male		Female		Total	
		N	%	N	%	N	%
≤40	At least one CHD	~	*	0	0.0%	~	*
	No CHD	*	*	7	100.0%	*	*
	Unknown	0	0.0%	0	0.0%	0	0.0%
	Total	37	100.0%	7	100.0%	44	100.0%
41–64	At least one CHD	*	*	*	*	101	12.8%
	No CHD	562	85.3%	117	88.0%	679	85.7%
	Unknown	*	*	~	*	12	1.5%
	Total	659	100.0%	133	100.0%	792	100.0%
65–79	At least one CHD	*	*	*	*	113	22.1%
	No CHD	280	74.1%	108	80.6%	388	75.8%
	Unknown	*	*	~	*	11	2.1%
	Total	378	100.0%	134	100.0%	512	100.0%
≥80	At least one CHD	*	*	*	*	*	*
	No CHD	58	72.5%	46	73.0%	104	72.7%
	Unknown	~	*	~	*	~	*
	Total	80	100.0%	63	100.0%	143	100.0%
Total	At least one CHD	*	*	*	*	249	16.7%
	No CHD	936	81.1%	278	82.5%	1214	81.4%
	Unknown	*	*	~	*	28	1.9%
	Total	1154	100.0%	337	100.0%	1491	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

		Not diabetic		Diabetes (diet control)		Diabetes (oral medications)		Diabetes (insulin)		Unknown		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Male	≤40	31	83.8%	~	*	~	*	~	*	~	*	37	100.0%
	41–64	538	81.6%	29	4.4%	46	7.0%	16	2.4%	30	4.6%	659	100.0%
	65–79	277	73.3%	21	5.6%	47	12.4%	14	3.7%	19	5.0%	378	100.0%
	≥80	62	77.5%	~	*	*	*	~	*	~	*	80	100.0%
	Total	908	78.7%	58	5.0%	103	8.9%	32	2.8%	53	4.6%	1154	100.0%
Female	≤40	~	*	~	*	~	*	~	*	~	*	7	100.0%
	41–64	101	75.9%	~	*	15	11.3%	8	6.0%	*	*	133	100.0%
	65–79	101	75.4%	*	*	16	11.9%	~	*	7	5.2%	134	100.0%
	≥80	*	*	~	*	*	*	~	*	~	*	63	100.0%
	Total	250	74.2%	13	3.9%	41	12.2%	16	4.7%	17	5.0%	337	100.0%
Total	≤40	33	75.0%	~	*	~	*	~	*	~	*	44	100.0%
	41–64	639	80.7%	32	4.0%	61	7.7%	24	3.0%	36	4.5%	792	100.0%
	65–79	378	73.8%	27	5.3%	63	12.3%	18	3.5%	26	5.1%	512	100.0%
	≥80	108	75.5%	*	*	*	*	~	*	~	*	143	100.0%
	Total	1158	77.7%	71	4.8%	144	9.7%	48	3.2%	70	4.7%	1491	100.0%

* Further suppression required in order to prevent disclosure of five cases or fewer

		Currently smoke		Formerly smoked		Never smoked		Unknown		Total	
		N	%	N	%	N	%	N	%	N	%
Male	≤40	24	64.9%	7	18.9%	6	16.2%	0	0.0%	37	100.0%
	41–64	335	50.8%	130	19.7%	138	20.9%	56	8.5%	659	100.0%
	65–79	77	20.4%	142	37.6%	121	32.0%	38	10.1%	378	100.0%
	≥80	9	11.3%	25	31.3%	33	41.3%	13	16.3%	80	100.0%
	Total	445	38.6%	304	26.3%	298	25.8%	107	9.3%	1154	100.0%
Female	≤40	7	100.0%	0	0.0%	0	0.0%	0	0.0%	7	100.0%
	41–64	70	52.6%	26	19.5%	29	21.8%	8	6.0%	133	100.0%
	65–79	45	33.6%	43	32.1%	34	25.4%	12	9.0%	134	100.0%
	≥80	11	17.5%	13	20.6%	31	49.2%	8	12.7%	63	100.0%
	Total	133	39.5%	82	24.3%	94	27.9%	28	8.3%	337	100.0%
Total	≤40	31	70%	7	15.9%	6	13.6%	0	0.0%	44	100.0%
	41–64	405	51.1%	156	19.7%	167	21.1%	64	8.1%	792	100.0%
	65–79	122	23.8%	185	36.1%	155	30.3%	50	9.8%	512	100.0%
	≥80	20	14.0%	38	26.6%	64	44.8%	21	14.7%	143	100.0%
	Total	578	38.8%	386	25.9%	392	26.3%	135	9.1%	1491	100.0%

[illegible]

	Male															
≤40	20	54.1%	11	29.7%	0	0.0%	~	*	0	0.0%	~	*	0	0.0%	37	100.0%
41–64	220	33.4%	178	27.0%	82	12.4%	45	6.8%	8	1.2%	79	12.0%	47	7.1%	659	100.0%
65–79	103	27.2%	96	25.4%	77	20.4%	28	7.4%	~	*	49	13.0%	*	*	378	100.0%
≥80	23	28.8%	23	28.8%	14	17.5%	~	*	~	*	*	*	~	*	80	100.0%
Total	366	31.7%	308	26.7%	173	15.0%	79	6.8%	13	1.1%	144	12.5%	71	6.2%	1154	100.0%
	Female															
≤40	~	*	~	*	~	*	~	*	0	0.0%	0	0.0%	0	0.0%	7	100.0%
41–64	40	30.1%	42	31.6%	22	16.5%	10	7.5%	~	*	12	9.0%	*	*	133	100.0%
65–79	23	17.2%	35	26.1%	40	29.9%	*	*	~	*	18	13.4%	10	7.5%	134	100.0%
≥80	*	*	*	*	*	*	*	*	~	*	6	9.5%	~	*	63	100.0%
Total	83	24.6%	98	29.1%	75	22.3%	*	*	~	*	36	10.7%	18	5.3%	337	100.0%
	Total															
≤40	23	52.3%	13	29.5%	~	*	~	*	0	0.0%	~	*	0	0.0%	44	100.0%
41–64	260	32.8%	220	27.8%	104	13.1%	55	6.9%	9	1.1%	91	11.5%	53	6.7%	792	100.0%
65–79	126	24.6%	131	25.6%	117	22.9%	35	6.8%	~	*	67	13.1%	*	*	512	100.0%
≥80	40	28.0%	42	29.4%	*	*	*	*	~	*	*	*	~	*	143	100.0%
Total	449	30.1%	406	27.2%	248	16.6%	103	6.9%	16	1.1%	180	12.1%	89	6.0%	1491	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..3: REFERRAL SOURCE TO A PERCUTANEOUS CORONARY INTERVENTION CENTRE FOR ALL PATIENTS, BY HOSPITAL (N=1491)

	Direct via ambulance		Self-presentation		Transfer from other hospital		Already inpatient in PCI centre		Other/unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Cork University Hospital	144	63.7%	29	12.8%	48	21.2%	~	*	~	*	226	100.0%
Letterkenny University Hospital	34	75.6%	0	0.0%	0	0.0%	0	0.0%	11	24.4%	45	100.0%
Mater Misericordiae University Hospital	187	53.1%	20	5.7%	136	38.6%	*	*	~	*	352	100.0%
St James's Hospital	223	57.2%	13	3.3%	150	38.5%	~	*	~	*	390	100.0%
University Hospital Galway	111	56.6%	24	12.2%	57	29.1%	~	*	~	*	196	100.0%
University Hospital Limerick	133	70.4%	21	11.1%	19	10.1%	~	*	*	*	189	100.0%
University Hospital Waterford	25	49.0%	9	17.6%	15	29.4%	~	*	~	*	51	100.0%
Beaumont Hospital	~	*	6	46.2%	0	0.0%	0	0.0%	~	*	13	100.0%
St Vincent's University Hospital	~	*	6	40.0%	~	*	~	*	~	*	15	100.0%
Tallaght University Hospital	~	*	9	64.3%	~	*	0	0.0%	0	0.0%	14	100.0%
National	868	58.2%	137	9.2%	429	28.8%	22	1.5%	35	2.3%	1491	100.0%

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FIGURE Error! No text of specified style in document..4: PROPORTION OF PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION WITH A SYMPTOM ONSET TO CALL FOR HELP INTERVAL WITHIN 60 MINUTES, BY SEX (n=868)

	Male		Female		Total	
	N	%	N	%	N	%
60 minutes or less	299	44.5%	82	41.8%	381	43.9%
61 minutes or more	317	47.2%	100	51.0%	417	48.0%
Unknown/missing	56	8.3%	14	7.1%	70	8.1%
Total	672	100.0%	196	100.0%	868	100.0%

FIGURE Error! No text of specified style in document..5: PROPORTION OF PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION WHO ARRIVED DIRECTLY BY AMBULANCE WITHIN THE TARGET TIME OF 90 MINUTES, BY PERCUTANEOUS CORONARY INTERVENTION CENTRE (n=744)

		90 minutes or less		91 minutes or more		Unknown/missing		Total	
		N	%	N	%	N	%	N	%
Cork University Hospital	Male	*	*	*	*	0	0.0%	96	100.0%
	Female	*	*	~	*	0	0.0%	23	100.0%
	Total	105	88.2%	14	11.8%	0	0.0%	119	100.0%
Letterkenny University Hospital	Male	*	*	~	*	0	0.0%	*	*
	Female	~	*	~	*	0	0.0%	~	*
	Total	*	*	~	*	0	0.0%	33	100.0%
Mater Misericordiae University Hospital	Male	115	87.1%	*	*	~	*	132	100.0%
	Female	37	86.0%	6	14.0%	0	0.0%	43	100.0%
	Total	152	86.9%	*	*	~	*	175	100.0%
St James's Hospital	Male	116	75.3%	38	24.7%	0	0.0%	154	100.0%
	Female	32	68.1%	15	31.9%	0	0.0%	47	100.0%
	Total	148	73.6%	53	26.4%	0	0.0%	201	100.0%
University Hospital Galway	Male	54	78.3%	*	*	~	*	69	100.0%
	Female	14	82.4%	~	*	~	*	17	100.0%
	Total	68	79.1%	*	*	~	*	86	100.0%
University Hospital Limerick	Male	58	72.5%	*	*	~	*	80	100.0%
	Female	20	71.4%	~	*	~	*	28	100.0%
	Total	78	72.2%	23	21.3%	7	6.5%	108	100.0%
University Hospital Waterford	Male	10	76.9%	~	*	~	*	*	*
	Female	~	*	0	0.0%	0	0.0%	~	*
	Total	15	83.3%	~	*	~	*	18	100.0%
Beaumont Hospital	Male	0	0.0%	0	0.0%	~	*	~	*
	Female	~	*	0	0.0%	0	0.0%	~	*
	Total	~	*	0	0.0%	~	*	~	*
St Vincent's University Hospital	Male	~	*	0	0.0%	0	0.0%	~	*
	Female	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Total	~	*	0	0.0%	0	0.0%	~	*
Tallaght University Hospital	Male	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Female	~	*	0	0.0%	0	0.0%	~	*
	Total	~	*	0	0.0%	0	0.0%	~	*
Total	Male	464	80.7%	*	*	*	*	575	100.0%
	Female	133	78.7%	*	*	~	*	169	100.0%

	Total	597	80.2%	135	18.1%	12	1.6%	744	100.0%
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~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..6: PROPORTION OF PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION WHO WERE TRANSFERRED, WHO ARRIVED WITHIN THE TARGET TIME OF 90 MINUTES, BY PERCUTANEOUSCORONARY INTERVENTION CENTRE (n=352)

		90 minutes or less		91 minutes or more		Unknown/missing		Total	
		N	%	N	%	N	%	N	%
Cork University Hospital	Bantry General Hospital	0	0.0%	6	100.0%	0	0.0%	6	100.0%
	Mercy University Hospital	~	*	~	*	~	*	7	100.0%
	Tipperary University Hospital	0	0.0%	6	100.0%	0	0.0%	6	100.0%
	University Hospital Kerry	0	0.0%	~	*	~	*	~	*
	University Hospital Waterford	0	0.0%	~	*	0	0.0%	~	*
	Other	0	0.0%	~	*	0	0.0%	~	*
	Total	~	*	20	80.0%	~	*	25	100.0%
Mater Misericordiae University Hospital	Beaumont Hospital	13	54.2%	11	45.8%	0	0.0%	24	100.0%
	Cavan General Hospital	~	*	*	*	0	0.0%	18	100.0%
	Connolly Hospital	23	53.5%	20	46.5%	0	0.0%	43	100.0%
	Our Lady of Lourdes Hospital Drogheda	8	32.0%	17	68.0%	0	0.0%	25	100.0%
	Our Lady's Hospital, Navan	~	*	*	*	0	0.0%	19	100.0%
	Midland Regional Hospital Portlaoise	0	0.0%	~	*	0	0.0%	~	*
	Other	~	*	~	*	0	0.0%	~	*
	Total	54	40.3%	80	59.7%	0	0.0%	134	100.0%
St James's Hospital	Midland Regional Hospital Tullamore	~	*	~	*	~	*	11	100.0%
	Naas General Hospital	7	50.0%	7	50.0%	0	0.0%	14	100.0%
	Regional Hospital Mullingar	~	*	*	*	0	0.0%	15	100.0%
	St Colmcille's Hospital, Loughlinstown	~	*	0	0.0%	0	0.0%	~	*
	St Luke's General Hospital, Carlow/Kilkenny	~	*	~	*	~	*	6	100.0%
	St Vincent's University Hospital	9	50.0%	9	50.0%	0	0.0%	18	100.0%
	Tallaght University Hospital	11	44.0%	14	56.0%	0	0.0%	25	100.0%
	Wexford General Hospital	0	0.0%	~	*	0	0.0%	~	*
	Midland Regional Hospital Portlaoise	~	*	*	*	0	0.0%	11	100.0%
	St Michael's Hospital, Dun Laoghaire	~	*	~	*	0	0.0%	~	*
	Other	0	0.0%	~	*	0	0.0%	~	*
	Total	*	*	72	62.6%	~	*	115	100.0%
University Hospital Galway	Mayo University Hospital	~	*	*	*	0	0.0%	16	100.0%
	Portiuncula University Hospital	~	*	*	*	0	0.0%	13	100.0%
	Sligo University Hospital	~	*	*	*	0	0.0%	9	100.0%
	Roscommon University Hospital	~	*	0	0.0%	0	0.0%	~	*
	Other	0	0.0%	~	*	0	0.0%	~	*
	Total	9	22.0%	32	78.0%	0	0.0%	41	100.0%
University Hospital Limerick	Nenagh General Hospital	0	0.0%	0	0.0%	~	*	~	*
	University Hospital Kerry	~	*	*	*	0	0.0%	11	100.0%
	Ennis Hospital	~	*	~	*	0	0.0%	~	*
	St John's Limerick	~	*	0	0.0%	0	0.0%	~	*
	Total	*	*	9	50.0%	~	*	18	100.0%
University Hospital Waterford	Tipperary University Hospital	0	0.0%	~	*	0	0.0%	~	*
	St Luke's General Hospital, Carlow/Kilkenny	0	0.0%	~	*	0	0.0%	~	*
	Wexford General Hospital	~	*	*	*	0	0.0%	7	100.0%
	Other	~	*	~	*	0	0.0%	~	*
	Total	~	*	*	*	0	0.0%	15	100.0%
St Vincent's University Hospital	St Colmcille's Hospital, Loughlinstown	~	*	0	0.0%	0	0.0%	~	*
	St Michael's Hospital, Dun Laoghaire	0	0.0%	~	*	0	0.0%	~	*
	Other	~	*	0	0.0%	0	0.0%	~	*
	Total	~	*	~	*	0	0.0%	~	*
	Naas General Hospital	0	0.0%	~	*	0	0.0%	~	*

Tallaght University Hospital	Total	0	0.0%	~	*	0	0.0%	~	*
Total		117	33.2%	228	64.8%	7	2.0%	352	100.0%

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FIGURE Error! No text of specified style in document..7: LOCATION OF AMBULANCE OFF-LOAD AT THE PERCUTANEOUS CORONARY INTERVENTION CENTRE FOR PATIENTS WHO ARRIVED DIRECTLY BY AMBULANCE, BY HOSPITAL (n=1217)

		Direct via ambulance		Transferred	
		N	%	N	%
Cork University Hospital	Ambulance off-load at cath lab	81	56.6%	18	72.0%
	Ambulance off-load at ED	62	43.4%	7	28.0%
	Unknown	0	0.0%	0	0.0%
	Total	143	100.0%	25	100.0%
Letterkenny University Hospital	Ambulance off-load at cath lab	34	100.0%		
	Ambulance off-load at ED	0	0.0%		
	Unknown	0	0.0%		
	Total	34	100.0%		
Mater Misericordiae University Hospital	Ambulance off-load at cath lab	147	78.6%	*	*
	Ambulance off-load at ED	40	21.4%	~	*
	Unknown	0	0.0%	0	0.0%
	Total	187	100.0%	134	100.0%
St James's Hospital	Ambulance off-load at cath lab	173	77.9%	*	*
	Ambulance off-load at ED	49	22.1%	~	*
	Unknown	0	0.0%	0	0.0%
	Total	222	100.0%	115	100.0%
University Hospital Galway	Ambulance off-load at cath lab	86	77.5%	35	85.4%
	Ambulance off-load at ED	25	22.5%	~	*
	Unknown	0	0.0%	~	*
	Total	111	100.0%	41	100.0%
University Hospital Limerick	Ambulance off-load at cath lab	93	69.9%	*	*
	Ambulance off-load at ED	40	30.1%	~	*
	Unknown	0	0.0%	0	0.0%
	Total	133	100.0%	18	100.0%
University Hospital Waterford	Ambulance off-load at cath lab	*	*	*	*
	Ambulance off-load at ED	~	*	0	0.0%
	Unknown	0	0.0%	~	*
	Total	24	100.0%	15	100.0%
Beaumont Hospital	Ambulance off-load at cath lab	0	0.0%		
	Ambulance off-load at ED	~	*		
	Unknown	0	0.0%		
	Total	~	*		
St Vincent's University Hospital	Ambulance off-load at cath lab	0	0.0%	~	*
	Ambulance off-load at ED	~	*	0	0.0%
	Unknown	0	0.0%	0	0.0%
	Total	~	*	~	*
Tallaght University Hospital	Ambulance off-load at cath lab	~	*	~	*
	Ambulance off-load at ED	~	*	0	0.0%
	Unknown	0	0.0%	0	0.0%
	Total	~	*	~	*

Total	Ambulance off-load at cath lab	635	73.4%	331	94.0%
	Ambulance off-load at ED	230	26.6%	*	*
	Unknown	0	0.0%	~	*
	Total	865	100.0%	352	100.0%

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FIGURE Error! No text of specified style in document.: REPERFUSION THERAPY TYPE, BY REFERRAL SOURCE AND PCI CENTRE (n=1456)

		Directly admitted to a PCI centre		Transferred to PCI centre		Total	
		N	%	N	%	N	%
Cork University Hospital	Thrombolysis	~	*	*	*	24	11%
	Primary PCI	142	80%	11	23%	153	68%
	No reperfusion required	*	*	~	*	8	4%
	Contraindicated	28	16%	12	25%	40	18%
	Total	177	100%	48	100%	225	100%
Letterkenny University Hospital	Thrombolysis	0	0%	0	0%	0	0%
	Primary PCI	*	*	0	0%	*	*
	No reperfusion required	~	*	0	0%	~	*
	Contraindicated	0	0%	0	0%	0	0%
	Total	34	100%	0	0%	34	100%
Mater Misericordiae University Hospital	Thrombolysis	0	0%	~	*	~	*
	Primary PCI	194	90%	108	79%	302	86%
	No reperfusion required	*	*	*	*	*	*
	Contraindicated	13	6%	19	14%	32	9%
	Unknown	~	*	0	0%	~	*
	Total	215	100%	136	100%	351	100%
St James's Hospital	Thrombolysis	~	*	*	*	36	9%
	Primary PCI	215	90%	95	63%	310	80%
	No reperfusion required	*	*	~	*	8	2%
	Contraindicated	17	7%	18	12%	35	9%
	Total	239	100%	150	100%	389	100%
University Hospital Galway	Thrombolysis	0	0%	*	*	16	8%
	Primary PCI	109	80%	26	46%	135	70%
	No reperfusion required	*	*	~	*	12	6%
	Contraindicated	20	15%	11	19%	31	16%
	Total	137	100%	57	100%	194	100%
University Hospital Limerick	Thrombolysis	0	0%	~	*	~	*
	Primary PCI	140	89%	16	84%	156	89%
	No reperfusion required	~	*	0	0%	~	*
	Contraindicated	*	*	~	*	18	10%
	Total	157	100%	19	100%	176	100%
University Hospital Waterford	Thrombolysis	~	*	0	0%	~	*
	Primary PCI	21	60%	10	67%	31	62%
	No reperfusion required	~	*	~	*	~	*
	Contraindicated	*	*	~	*	14	28%
	Total	35	100%	15	100%	50	100%
Beaumont Hospital	Thrombolysis	~	*	0	0%	~	*
	Primary PCI	7	78%	0	0%	7	78%
	No reperfusion required	0	0%	0	0%	0	0%
	Contraindicated	~	*	0	0%	~	*
	Total	9	100%	0	0%	9	100%
St Vincent's University Hospital	Thrombolysis	0	0%	0	0%	0	0%
	Primary PCI	*	*	~	*	*	*
	No reperfusion required	~	*	~	*	~	*
	Contraindicated	0	0%	0	0%	0	0%
	Total	*	*	~	*	14	100%
Tallaght University Hospital	Thrombolysis	0	0%	0	0%	0	0%
	Primary PCI	10	77%	~	*	11	79%
	No reperfusion required	~	*	0	0%	~	*
	Contraindicated	~	*	0	0%	~	*

	Total	13	100%	~	*	14	100%
Total	Thrombolysis	~	*	*	*	81	6%
	Primary PCI	879	86%	268	62%	1147	79%
	No reperfusion required	37	4%	18	4%	*	*
	Contraindicated	106	10%	66	15%	172	12%
	Unknown	~	*	0	0%	~	*
	Total	1027	100%	429	100%	1456	100%

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FIGURE Error! No text of specified style in document..9: DOOR TO BALLOON TIME FOR PATIENTS DIRECTLY ADMITTED OR TRANSFERRED TO A PERCUTANEOUS CORONARY INTERVENTION CENTRE, BY HOSPITAL (n=1147)

		30 minutes or less		31 minutes or more		Unknown		Total	
		N	%	N	%	N	%	N	%
Cork University Hospital	Directly admitted to a PCI centre	*	*	*	*	0	0.0%	142	100.0%
	Transferred to PCI Centre	*	*	~	*	0	0.0%	11	100.0%
	Total	54	35.3%	99	64.7%	0	0.0%	153	100.0%
Letterkenny University Hospital	Directly admitted to a PCI centre	21	65.6%	11	34.4%	0	0.0%	32	100.0%
	Total	21	65.6%	11	34.4%	0	0.0%	32	100.0%
Mater Misericordiae University Hospital	Directly admitted to a PCI centre	129	66.5%	65	33.5%	0	0.0%	194	100.0%
	Transferred to PCI Centre	92	85.2%	16	14.8%	0	0.0%	108	100.0%
	Total	221	73.2%	81	26.8%	0	0.0%	302	100.0%
St James's Hospital	Directly admitted to a PCI centre	154	71.6%	61	28.4%	0	0.0%	215	100.0%
	Transferred to PCI Centre	61	64.2%	34	35.8%	0	0.0%	95	100.0%
	Total	215	69.4%	95	30.6%	0	0.0%	310	100.0%
University Hospital Galway	Directly admitted to a PCI centre	41	37.6%	68	62.4%	0	0.0%	109	100.0%
	Transferred to PCI Centre	12	46.2%	14	53.8%	0	0.0%	26	100.0%
	Total	53	39.3%	82	60.7%	0	0.0%	135	100.0%
University Hospital Limerick	Directly admitted to a PCI centre	*	*	*	*	~	*	140	100.0%
	Transferred to PCI Centre	*	*	~	*	0	0.0%	16	100.0%
	Total	96	61.5%	*	*	~	*	156	100.0%
University Hospital Waterford	Directly admitted to a PCI centre	*	*	*	*	0	0.0%	21	100.0%
	Transferred to PCI Centre	~	*	~	*	0	0.0%	10	100.0%
	Total	12	38.7%	19	61.3%	0	0.0%	31	100.0%
Beaumont Hospital	Directly admitted to a PCI centre	0	0.0%	7	100.0%	0	0.0%	7	100.0%
	Total	0	0.0%	7	100.0%	0	0.0%	7	100.0%
St Vincent's University Hospital	Directly admitted to a PCI centre	0	0.0%	*	*	0	0.0%	*	*
	Transferred to PCI Centre	0	0.0%	~	*	0	0.0%	~	*
	Total	0	0.0%	10	100.0%	0	0.0%	10	100.0%
Tallaght University Hospital	Directly admitted to a PCI centre	0	0.0%	10	100.0%	0	0.0%	10	100.0%
	Transferred to PCI Centre	~	*	0	0.0%	0	0.0%	~	*
	Total	~	*	10	90.9%	0	0.0%	~	*

Total	Directly admitted to a PCI centre	481	54.7%	*	*	~	*	879	100.0%
	Transferred to PCI Centre	192	71.6%	76	28.4%	0	0.0%	268	100.0%
	Total	673	58.7%	*	*	~	*	1147	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..10: PROPORTION OF PATIENTS WHO RECEIVED TIMELY PRIMARY PERCUTANEOUS CORONARY INTERVENTION AND THROMBOLYSIS REPERFUSION BY HOSPITAL (n=1228)

	Timely reperfusion		Not timely reperfusion		Unknown		Total	
	N	%	N	%	N	%	N	%
Cork University Hospital	118	67%	59	33%	0	0%	177	100%
Letterkenny University Hospital	*	*	~	*	0	0%	32	100%
Mater Misericordiae University Hospital	218	72%	86	28%	0	0%	304	100%
St James's Hospital	204	59%	*	*	~	*	346	100%
University Hospital Galway	96	64%	*	*	~	*	151	100%
University Hospital Limerick	147	94%	10	6%	0	0%	157	100%
University Hospital Waterford	19	59%	13	41%	0	0%	32	100%
Beaumont Hospital	~	*	~	*	0	0%	8	100%
St Vincent's University Hospital	*	*	~	*	0	0%	10	100%
Tallaght University Hospital	*	*	~	*	0	0%	11	100%
Total	852	69%	*	*	~	*	1228	100%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..11: PROPORTION OF PATIENTS WHO RECEIVED TIMELY REPERFUSION WITH THROMBOLYSIS (n=81)

	N	%
Timely (within 30 minutes)	*	*
Not timely	60	74%
Unknown	~	*
Total	81	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..12: PROPORTION OF TIMELY PRIMARY PERCUTANEOUS CORONARY INTERVENTION FOR PATIENTS ADMITTED DIRECTLY OR TRANSFERRED TO A PERCUTANEOUS CORONARY INTERVENTION CENTRE, BY PCI CENTRE (n=1147)

		Timely (within 120 minutes)		Not timely		Unknown		Total	
		N	%	N	%	N	%	N	%
Cork University Hospital	Directly admitted to a PCI centre	*	*	*	*	0	0.0%	142	100.0%
	Transferred to PCI Centre	~	*	*	*	0	0.0%	11	100.0%

	Total	110	71.9%	43	28.1%	0	0.0%	153	100.0%
Letterkenny University Hospital	Directly admitted to a PCI centre	*	*	~	*	0	0.0%	32	100.0%
	Total	*	*	~	*	0	0.0%	32	100.0%
Mater Misericordiae University Hospital	Directly admitted to a PCI centre	170	87.6%	24	12.4%	0	0.0%	194	100.0%
	Transferred to PCI Centre	48	44.4%	60	55.6%	0	0.0%	108	100.0%
	Total	218	72.2%	84	27.8%	0	0.0%	302	100.0%
St James's Hospital	Directly admitted to a PCI centre	164	76.3%	51	23.7%	0	0.0%	215	100.0%
	Transferred to PCI Centre	*	*	56	58.9%	~	*	95	100.0%
	Total	202	65.2%	*	*	~	*	310	100.0%
University Hospital Galway	Directly admitted to a PCI centre	80	73.4%	29	26.6%	0	0.0%	109	100.0%
	Transferred to PCI Centre	7	26.9%	19	73.1%	0	0.0%	26	100.0%
	Total	87	64.4%	48	35.6%	0	0.0%	135	100.0%
University Hospital Limerick	Directly admitted to a PCI centre	*	*	~	*	0	0.0%	140	100.0%
	Transferred to PCI Centre	*	*	~	*	0	0.0%	16	100.0%
	Total	147	94.2%	9	5.8%	0	0.0%	156	100.0%
University Hospital Waterford	Directly admitted to a PCI centre	*	*	~	*	0	0.0%	21	100.0%
	Transferred to PCI Centre	*	*	*	*	0	0.0%	10	100.0%
	Total	18	58.1%	13	41.9%	0	0.0%	31	100.0%
Beaumont Hospital	Directly admitted to a PCI centre	~	*	~	*	0	0.0%	7	100.0%
	Total	~	*	~	*	0	0.0%	7	100.0%
St Vincent's University Hospital	Directly admitted to a PCI centre	*	*	~	*	0	0.0%	*	*
	Transferred to PCI Centre	~	*	0	0.0%	0	0.0%	~	*
	Total	*	*	~	*	0	0.0%	10	100.0%
Tallaght University Hospital	Directly admitted to a PCI centre	*	*	~	*	0	0.0%	*	*
	Transferred to PCI Centre	~	*	0	0.0%	0	0.0%	~	*
	Total	*	*	~	*	0	0.0%	11	100.0%
Total	Directly admitted to a PCI centre	*	*	157	17.9%	*	*	879	100.0%
	Transferred to PCI Centre	*	*	157	58.6%	~	*	268	100.0%
	Total	832	73%	*	*	~	*	1147	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..13: PROPORTION OF TIMELY PRIMARY PERCUTANEOUS CORONARY INTERVENTION FOR PATIENTS WHO WERE TRANSFERRED TO A PERCUTANEOUS CORONARY INTERVENTION CENTRE, BY REFERRING HOSPITAL (n=268)

		Timely (within 120 minutes)		Not timely		Unknown		Total	
		N	%	N	%	N	%	N	%
Cork University Hospital	Bantry General Hospital	~	*	~	*	0	0.0%	~	*
	Mercy University Hospital	~	*	~	*	0	0.0%	~	*
	Tipperary University Hospital	0	0.0%	~	*	0	0.0%	~	*
	Other	0	0.0%	~	*	0	0.0%	~	*
	Total	~	*	*	*	0	0.0%	11	100.0%
Mater Misericordiae University Hospital	Beaumont Hospital	9	50.0%	9	50.0%	0	0.0%	18	100.0%
	Cavan General Hospital	~	*	*	*	0	0.0%	15	100.0%
	Connolly Hospital	20	57.1%	15	42.9%	0	0.0%	35	100.0%

	Our Lady of Lourdes Hospital Drogheda	8	38.1%	13	61.9%	0	0.0%	21	100.0%
	Our Lady's Hospital, Navan	8	53.3%	7	46.7%	0	0.0%	15	100.0%
	Midland Regional Hospital Portlaoise	0	0.0%	~	*	0	0.0%	~	*
	Other	~	*	~	*	0	0.0%	~	*
	Total	48	44.4%	60	55.6%	0	0.0%	108	100.0%
St James's Hospital	Midland Regional Hospital Tullamore	~	*	~	*	~	*	10	100.0%
	Naas General Hospital	~	*	~	*	0	0.0%	9	100.0%
	Regional Hospital Mullingar	~	*	*	*	0	0.0%	13	100.0%
	St Colmcille's Hospital, Loughlinstown	~	*	0	0.0%	0	0.0%	~	*
	St Luke's General Hospital, Carlow/Kilkenny	~	*	~	*	0	0.0%	~	*
	St Vincent's University Hospital	8	47.1%	9	52.9%	0	0.0%	17	100.0%
	Tallaght University Hospital	10	43.5%	13	56.5%	0	0.0%	23	100.0%
	Wexford General Hospital	0	0.0%	~	*	0	0.0%	~	*
	Midland Regional Hospital Portlaoise	~	*	~	*	0	0.0%	7	100.0%
	St Michaels Hospital, Dun Laoghaire	~	*	~	*	0	0.0%	~	*
	Other	0	0.0%	~	*	0	0.0%	~	*
	Total	*	*	56	58.9%	~	*	95	100.0%
University Hospital Galway	Mayo University Hospital	~	*	*	*	0	0.0%	11	100.0%
	Portiuncula University Hospital	~	*	~	*	0	0.0%	7	100.0%
	Sligo University Hospital	~	*	~	*	0	0.0%	6	100.0%
	Roscommon University Hospital	~	*	0	0.0%	0	0.0%	~	*
	Other	0	0.0%	~	*	0	0.0%	~	*
	Total	7	26.9%	19	73.1%	0	0.0%	26	100.0%
University Hospital Limerick	UL Hospitals, Nenagh Hospital	~	*	0	0.0%	0	0.0%	~	*
	University Hospital Kerry	*	*	~	*	0	0.0%	9	100.0%
	Ennis Hospital	~	*	~	*	0	0.0%	~	*
	St Johns Limerick	~	*	0	0.0%	0	0.0%	~	*
	Total	12	75.0%	~	*	0	0.0%	16	100.0%
University Hospital Waterford	Tipperary University Hospital	0	0.0%	~	*	0	0.0%	~	*
	St Luke's General Hospital, Carlow/Kilkenny	0	0.0%	~	*	0	0.0%	~	*
	Wexford General Hospital	0	0.0%	~	*	0	0.0%	~	*
	Total	0	0.0%	10	100.0%	0	0.0%	10	100.0%
St Vincent's University Hospital	St Colmcille's Hospital, Loughlinstown	~	*	0	0.0%	0	0.0%	~	*
	Total	~	*	0	0.0%	0	0.0%	~	*
Tallaght University Hospital	Naas General Hospital	~	*	0	0.0%	0	0.0%	~	*
	Total	~	*	0	0.0%	0	0.0%	~	*
Total		*	*	157	58.6%	~	*	268	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..14: TYPE OF ARTERIAL ACCESS, BY HOSPITAL (n=1175)

	Radial access		Other		Missing		Total	
	N	%	N	%	N	%	N	%
Cork University Hospital	132	86.3%	21	13.7%	0	0.0%	153	100.0%
Letterkenny University Hospital	*	*	0	0.0%	~	*	42	100.0%
Mater Misericordiae University Hospital	271	89.4%	*	*	~	*	303	100.0%
St James's Hospital	303	97.4%	8	2.6%	0	0.0%	311	100.0%
University Hospital Galway	130	94.9%	7	5.1%	0	0.0%	137	100.0%

University Hospital Limerick	164	98.8%	~	*	~	*	166	100.0%
University Hospital Waterford	*	*	~	*	0	0.0%	31	100.0%
Beaumont Hospital	*	*	~	*	0	0.0%	10	100.0%
St Vincent's University Hospital	*	*	~	*	0	0.0%	11	100.0%
Tallaght University Hospital	*	*	~	*	0	0.0%	11	100.0%
Total	1092	92.9%	*	*	~	*	1175	100.0%

~ Denotes five cases or fewer

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FIGURE Error! No text of specified style in document..15: PERCENTAGE COMPLETENESS OF SURVIVAL STATUS AT 30 DAYS (N=1491)

	Recorded		Not recorded		Total	
	N	%	N	%	N	%
Cork University Hospital	196	86.7%	30	13.3%	226	100.0%
Letterkenny University Hospital	2	4.4%	43	95.6%	45	100.0%
Mater Misericordiae University Hospital	245	69.6%	107	30.4%	352	100.0%
St James's Hospital	76	19.5%	314	80.5%	390	100.0%
University Hospital Galway	141	71.9%	55	28.1%	196	100.0%
University Hospital Limerick	188	99.5%	1	0.5%	189	100.0%
University Hospital Waterford	34	66.7%	17	33.3%	51	100.0%
Non-designated 9-5 PCI centres	31	73.8%	11	26.2%	42	100.0%
Total	913	61.2%	578	38.8%	1491	100.0%

FIGURE Error! No text of specified style in document..16: DISCHARGE DESTINATION FROM PERCUTANEOUS CORONARY INTERVENTION CENTRES, BY SEX AND HOSPITAL (N=1491)

		Male		Female		Total	
		N	%	N	%	N	%
Cork University Hospital	Home	127	69.8%	34	77.3%	161	71.2%
	Transferred	*	*	~	*	39	17.3%
	Other	*	*	*	*	26	11.5%
	Total	182	100.0%	44	100.0%	226	100.0%
Letterkenny University Hospital	Home	*	*	~	*	38	84.4%
	Transferred	~	*	~	*	~	*
	Other	~	*	0	0.0%	~	*
	Total	39	100.0%	6	100.0%	45	100.0%
Mater Misericordiae University Hospital	Home	64	24.4%	16	17.8%	80	22.7%
	Transferred	186	71.0%	64	71.1%	250	71.0%
	Other	12	4.6%	10	11.1%	22	6.3%
	Total	262	100.0%	90	100.0%	352	100.0%
St James's Hospital	Home	97	33.0%	25	26.0%	122	31.3%
	Transferred	180	61.2%	58	60.4%	238	61.0%
	Other	17	5.8%	13	13.5%	30	7.7%
	Total	294	100.0%	96	100.0%	390	100.0%

University Hospital Galway	Home	112	70.0%	25	69.4%	137	69.9%
	Transferred	*	*	*	*	52	26.5%
	Other	*	*	~	*	7	3.6%
	Total	160	100.0%	36	100.0%	196	100.0%
University Hospital Limerick	Home	112	76.7%	35	81.4%	147	77.8%
	Transferred	*	*	~	*	30	15.9%
	Other	*	*	~	*	12	6.3%
	Total	146	100.0%	43	100.0%	189	100.0%
University Hospital Waterford	Home	23	63.9%	9	60.0%	32	62.7%
	Transferred	*	*	~	*	13	25.5%
	Other	~	*	~	*	6	11.8%
	Total	36	100.0%	15	100.0%	51	100.0%
Beaumont Hospital	Home	*	*	~	*	*	*
	Other	~	*	0	0.0%	~	*
	Total	*	*	~	*	13	100.0%
St Vincent's University Hospital	Home	*	*	~	*	15	100.0%
	Total	*	*	~	*	15	100.0%
Tallaght University Hospital	Home	7	70.0%	~	*	11	78.6%
	Transferred	~	*	0	0.0%	~	*
	Other	~	*	0	0.0%	~	*
	Total	*	*	~	*	14	100.0%
Total	Home	599	51.9%	156	46.3%	755	50.6%
	Transferred	485	42.0%	144	42.7%	629	42.2%
	Other	70	6.1%	37	11.0%	107	7.2%
	Total	1154	100.0%	337	100.0%	1491	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE **ERROR! NO TEXT OF SPECIFIED STYLE IN DOCUMENT..17**: SMOKING CESSATION ADVICE PROVIDED, BY SEX AND AGE GROUP (n=578)

		Yes		No - patient declined		Unknown		Total	
		N	%	N	%	N	%	N	%
Male	≤40	*	*	~	*	~	*	24	100.0%
	41–64	295	88.1%	9	2.7%	31	9.3%	335	100.0%
	65–79	64	83.1%	~	*	10	13.0%	77	100.0%
	≥80	~	*	~	*	~	*	9	100.0%
	Total	385	86.5%	14	3.1%	46	10.3%	445	100.0%
Female	≤40	6	85.7%	0	0.0%	~	*	7	100.0%
	41–64	59	84.3%	~	*	*	*	70	100.0%
	65–79	34	75.6%	~	*	*	*	45	100.0%
	≥80	*	*	0	0.0%	~	*	11	100.0%
	Total	108	81.2%	~	*	*	*	133	100.0%
Total	≤40	27	87.1%	~	*	~	*	31	100.0%
	41–64	354	87.4%	10	2.5%	41	10.1%	405	100.0%
	65–79	98	80.3%	~	*	*	*	122	100.0%
	≥80	14	70.0%	~	*	~	*	20	100.0%
	Total	493	85.3%	17	2.9%	68	11.8%	578	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..18: PROPORTION OF PATIENTS PRESCRIBED SECONDARY PREVENTION MEDICATION ON DISCHARGE

	Yes		No		Contraindicated		Total	
	N	%	N	%	N	%	N	%
Second anti-platelet agent	1245	97.3%	14	1.1%	20	1.6%	1279	100.0%
Statin	1222	98.8%	*	*	~	*	1237	100.0%
Beta-blocker	1110	93.8%	39	3.3%	34	2.9%	1183	100.0%
Aspirin	1252	98.0%	*	*	*	*	1278	100.0%
ACEI or ARB	1028	87.5%	77	6.6%	70	6.0%	1175	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..19: PROPORTION OF PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION REFERRED FOR CARDIAC REHABILITATION PHASE 3, BY HOSPITAL AND SEX (N=1408)

		Male		Female		Total	
		N	%	N	%	N	%
Cork University Hospital	Yes	129	76.3%	19	52.8%	148	72.2%
	No – patient declined	8	4.7%	*	*	14	6.8%
	No – due to comorbidity	17	10.1%	9	25.0%	26	12.7%
	Unknown	*	*	~	*	17	8.3%
	Total	169	100.0%	36	100.0%	205	100.0%
Letterkenny University Hospital	Yes	35	89.7%	6	100.0%	41	91.1%
	No – due to comorbidity	~	*	0	0.0%	~	*
	Unknown	~	*	0	0.0%	~	*
	Total	39	100.0%	6	100.0%	45	100.0%
Mater Misericordiae University Hospital	Yes	136	54.0%	37	46.3%	173	52.1%
	No – patient declined	19	7.5%	10	12.5%	29	8.7%
	No – due to comorbidity	13	5.2%	*	*	21	6.3%
	No – no reason	*	*	~	*	11	3.3%
	Unknown	76	30.2%	22	27.5%	98	29.5%
	Total	252	100.0%	80	100.0%	332	100.0%
St James's Hospital	Yes	93	33.1%	14	16.3%	107	29.2%
	No – patient declined	~	*	0	0.0%	~	*
	No – due to comorbidity	*	*	*	*	16	4.4%
	No – no reason	0	0.0%	~	*	~	*
	Unknown	178	63.3%	64	74.4%	242	65.9%
	Total	281	100.0%	86	100.0%	367	100.0%
University Hospital Galway	Yes	129	81.1%	26	72.2%	155	79.5%
	No – patient declined	*	*	~	*	8	4.1%
	No – due to comorbidity	~	*	~	*	~	*
	No – no reason	0	0.0%	~	*	~	*
	Unknown	20	12.6%	6	16.7%	26	13.3%
	Total	159	100.0%	36	100.0%	195	100.0%
University Hospital Limerick	Yes	68	49.3%	17	42.5%	85	47.8%
	No – patient declined	27	19.6%	6	15.0%	33	18.5%
	No – due to comorbidity	40	29.0%	17	42.5%	57	32.0%
	No – no reason	~	*	0	0.0%	~	*
	Unknown	~	*	0	0.0%	~	*
	Total	138	100.0%	40	100.0%	178	100.0%
University Hospital Waterford	Yes	27	84.4%	9	64.3%	36	78.3%
	No – patient declined	~	*	~	*	~	*
	No – due to comorbidity	0	0.0%	~	*	~	*
	No – no reason	~	*	0	0.0%	~	*

	Unknown	~	*	~	*	~	*
	Total	32	100.0%	14	100.0%	46	100.0%
Beaumont Hospital	Yes	*	*	~	*	*	*
	No – patient declined	~	*	0	0.0%	~	*
	Total	10	100.0%	~	*	12	100.0%
St Vincent's University Hospital	Yes	*	*	~	*	15	100.0%
	Total	*	*	~	*	15	100.0%
Tallaght University Hospital	Yes	*	*	~	*	11	84.6%
	No – due to comorbidity	~	*	0	0.0%	~	*
	Unknown	0	0.0%	~	*	~	*
	Total	*	*	~	*	13	100.0%
Total	Yes	648	58.7%	134	43.9%	782	55.5%
	No – patient declined	*	*	*	*	91	6.5%
	No – due to comorbidity	84	7.6%	45	14.8%	129	9.2%
	No – no reason	*	*	~	*	15	1.1%
	Unknown	295	26.7%	96	31.5%	391	27.8%
	Total	1103	100.0%	305	100.0%	1408	100.0%

~ Denotes five cases or fewer

* Further suppression required in order to prevent disclosure of five cases or fewer

FIGURE Error! No text of specified style in document..20: PERCENTAGE COMPLETENESS OF DATE OF FIRST PHASE 3 CR APPOINTMENT (n=782)

	Recorded		Not recorded		Total	
	N	%	N	%	N	%
Cork University Hospital	43	29.1%	105	70.9%	148	100.0%
Letterkenny University Hospital	0	0.0%	41	100.0%	41	100.0%
Mater Misericordiae University Hospital	56	32.4%	117	67.6%	173	100.0%
St James's Hospital	7	6.5%	100	93.5%	107	100.0%
University Hospital Galway	61	39.4%	94	60.6%	155	100.0%
University Hospital Limerick	13	15.3%	72	84.7%	85	100.0%
University Hospital Waterford	6	16.7%	30	83.3%	36	100.0%
Non-designated 9-5 PCI centres	10	27.0%	27	73.0%	37	100.0%
Total	196	25.1%	586	74.9%	782	100.0%

APPENDIX 7: HEARTBEAT VARIABLE COMPLETENESS

		2021	
		N	%
Previous MI	Recorded	1458	97.8%
	Unknown	32	2.1%
	Missing	1	0.1%
	Total	1491	100.0%
Previous angina	Recorded	1464	98.2%
	Unknown	27	1.8%
	Missing	0	0.0%
	Total	1491	100.0%
Previous Peripheral vascular disease	Recorded	1473	98.8%
	Unknown	18	1.2%
	Missing	0	0.0%
	Total	1491	100.0%
Previous cerebrovascular disease	Recorded	1465	98.3%
	Unknown	26	1.7%
	Missing	0	0.0%
	Total	1491	100.0%
Previous chronic renal failure	Recorded	1465	98.3%
	Unknown	26	1.7%
	Missing	0	0.0%
	Total	1491	100.0%
Previous chronic lung disease	Recorded	1466	98.3%
	Unknown	25	1.7%
	Missing	0	0.0%
	Total	1491	100.0%
Previous percutaneous coronary intervention (PCI)	Recorded	1476	99.0%
	Unknown	15	1.0%
	Missing	0	0.0%
	Total	1491	100.0%
Previous coronary artery bypass graft (CABG)	Recorded	1475	98.9%
	Unknown	16	1.1%
	Missing	0	0.0%
	Total	1491	100.0%
Previous other heart surgery	Recorded	1476	99.0%
	Unknown	15	1.0%
	Missing	0	0.0%
	Total	1491	100.0%
Diabetes mellitus	Recorded	1421	95.3%
	Unknown	70	4.7%
	Missing	0	0.0%
	Total	1491	100.0%
Smoking status	Recorded	1371	92.0%
	Unknown	120	8.0%
	Missing	0	0.0%
	Total	1491	100.0%
Previous hypercholesterolemia	Recorded	1381	92.6%
	Unknown	110	7.4%
	Missing	0	0.0%
	Total	1491	100.0%
	Recorded	1404	94.2%

Previous hypertension	Unknown	87	5.8%
	Missing	0	0.0%
	Total	1491	100.0%
Source of referral	Recorded	1490	99.9%
	Unknown	1	0.1%
	Missing	0	0.0%
	Total	1491	100.0%
Ambulance arrival information	Recorded	868	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	868	100.0%
Arrival Information, admission method (other hospital)	Recorded	427	99.5%
	Unknown	0	0.0%
	Missing	2	0.5%
	Total	429	100.0%
Arrival Information, source of referral (other hospital)	Recorded	425	99.1%
	Unknown	1	0.2%
	Missing	3	0.7%
	Total	429	100.0%
Source of referral (other)	Recorded	34	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	34	100.0%
Helicopter	Recorded	1295	99.8%
	Unknown	0	0.0%
	Missing	2	0.2%
	Total	1297	100.0%
Aspirin pre-admission/admission	Recorded	1490	99.9%
	Unknown	1	0.1%
	Missing	0	0.0%
	Total	1491	100.0%
Other antiplatelet pre-admission/admission	Recorded	1489	99.9%
	Unknown	2	0.1%
	Missing	0	0.0%
	Total	1491	100.0%
Symptom onset date	Recorded	1488	99.8%
	Unknown	0	0.0%
	Missing	3	0.2%
	Total	1491	100.0%
Symptom onset time	Recorded	1400	93.9%
	Unknown	0	0.0%
	Missing	91	6.1%
	Total	1491	100.0%
Call for help date	Recorded	1482	99.4%
	Unknown	0	0.0%
	Missing	9	0.6%
	Total	1491	100.0%
Call for help time	Recorded	1419	95.2%
	Unknown	0	0.0%
	Missing	72	4.8%
	Total	1491	100.0%
	Recorded	1491	100.0%

First positive electrocardiogram (ECG) date	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1491	100.0%
First positive ECG time	Recorded	1491	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1491	100.0%
First positive ECG location	Recorded	1489	99.9%
	Unknown	2	0.1%
	Missing	0	0.0%
	Total	1491	100.0%
First positive ECG location (other)	Recorded	55	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	55	100.0%
ECG transmission (by ambulance service)	Recorded	339	39.1%
	Unknown	1	0.1%
	Missing	528	60.8%
	Total	868	100.0%
Arrival at first hospital date	Recorded	1491	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1491	100.0%
Arrival at first hospital time	Recorded	1491	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1491	100.0%
Arrival at PCI centre hospital date	Recorded	1491	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1491	100.0%
Arrival at PCI centre hospital time	Recorded	1491	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1491	100.0%
Patient status on admission	Recorded	1490	99.9%
	Unknown	1	0.1%
	Missing	0	0.0%
	Total	1491	100.0%
Patient status (other)	Recorded	46	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	46	100.0%
Contraindicated to reperfusion therapy	Recorded	1490	99.9%
	Unknown	0	0.0%
	Missing	1	0.1%
	Total	1491	100.0%
Contraindication to reperfusion therapy reason	Recorded	178	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	178	100.0%
	Recorded	14	87.5%

Contraindication to reperfusion therapy reason (other)	Unknown	0	0.0%
	Missing	2	12.5%
	Total	16	100.0%
Reperfusion therapy type	Recorded	1331	89.3%
	Unknown	0	0.0%
	Missing	160	10.7%
	Total	1491	100.0%
Reperfusion therapy Date	Recorded	1269	99.8%
	Unknown	0	0.0%
	Missing	3	0.2%
	Total	1272	100.0%
Reperfusion therapy Time	Recorded	1269	99.8%
	Unknown	0	0.0%
	Missing	3	0.2%
	Total	1272	100.0%
Was angiogram performed	Recorded	1490	99.9%
	Unknown	0	0.0%
	Missing	1	0.1%
	Total	1491	100.0%
Angiogram performed as part of?	Recorded	1467	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1467	100.0%
Outcome of angiogram/PCI	Recorded	1467	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1467	100.0%
Percutaneous arterial access	Recorded	1467	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1467	100.0%
Late reperfusion therapy (thrombolysis or primary PCI)	Recorded	1268	99.7%
	Unknown	0	0.0%
	Missing	4	0.3%
	Total	1272	100.0%
Late reperfusion therapy reason (if reperfusion therapy outside targets)	Recorded	276	68.8%
	Unknown	121	30.2%
	Missing	4	1.0%
	Total	401	100.0%
Late Reperfusion therapy reason (other)	Recorded	106	97.2%
	Unknown	0	0.0%
	Missing	3	2.8%
	Total	109	100.0%
Discharge diagnosis	Recorded	1491	100.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	1491	100.0%
Discharge diagnosis (other)	Recorded	0	0.0%
	Unknown	0	0.0%
	Missing	0	0.0%
	Total	0	0.0%
	Recorded	1151	90.5%

Bleeding (following any intervention)	Unknown	113	8.9%
	Missing	8	0.6%
	Total	1272	100.0%
Stroke during hospital stay	Recorded	1275	85.5%
	Unknown	188	12.6%
	Missing	28	1.9%
	Total	1491	100.0%
Hospital of discharge	Recorded	1462	98.1%
	Unknown	0	0.0%
	Missing	29	1.9%
	Total	1491	100.0%
Survival status on discharge home	Recorded	1128	75.7%
	Unknown	325	21.8%
	Missing	38	2.5%
	Total	1491	100.0%
Aspirin on discharge	Recorded	1277	93.2%
	Unknown	90	6.6%
	Missing	3	0.2%
	Total	1370	100.0%
Other antiplatelet therapy on discharge	Recorded	1278	93.3%
	Unknown	90	6.6%
	Missing	2	0.1%
	Total	1370	100.0%
Beta-blocker on discharge	Recorded	1183	86.4%
	Unknown	185	13.5%
	Missing	2	0.1%
	Total	1370	100.0%
Statin on discharge	Recorded	1237	90.3%
	Unknown	131	9.6%
	Missing	2	0.1%
	Total	1370	100.0%
angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	Recorded	1175	85.8%
	Unknown	191	13.9%
	Missing	4	0.3%
	Total	1370	100.0%
Smoking cessation counseling (for smokers)	Recorded	525	88.5%
	Unknown	37	6.2%
	Missing	31	5.2%
	Total	593	100.0%
Referral to cardiac rehabilitation (CR) phase 3	Recorded	1017	68.2%
	Unknown	363	24.3%
	Missing	111	7.4%
	Total	1491	100.0%
Hospital for CR	Recorded	775	99.1%
	Unknown	1	0.1%
	Missing	6	0.8%
	Total	782	100.0%
Date of first phase 3 CR appointment	Recorded	196	25.1%
	Unknown	0	0.0%
	Missing	586	74.9%
	Total	782	100.0%

Survival status at 30 days post-MI	Known	814	77.9%
	Unknown	151	14.4
	Missing	80	7.7
	Total	1045	100.0
Cause of death	Recorded	81	97.6%
	Unknown	2	2.4%
	Missing	0	0.0%
	Total	83	100.0%

APPENDIX 8: HEARTBEAT VARIABLE COMPLETENESS FOR ITEMS WITH <90% COMPLETENESS BY PCI CENTRE

		Recorded		Unknown		Missing		Total	
		N	%	N	%	N	%	N	%
Cork University Hospital	Date of first phase 3 CR appointment	43	29.1%	0	0.0%	105	70.9%	148	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	188	83.2%	17	7.5%	21	9.3%	226	100.0%
	Smoking cessation counseling (for smokers)	88	88.0%	3	3.0%	9	9.0%	100	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	199	97.1%	6	2.9%	0	0.0%	205	100.0%
	Beta-blocker on discharge	200	97.6%	5	2.4%	0	0.0%	205	100.0%
	Survival status on discharge home	220	97.3%	6	2.7%	0	0.0%	226	100.0%
	Stroke during hospital stay	223	98.7%	3	1.3%	0	0.0%	226	100.0%
	Bleeding (following any intervention)	174	98.3%	3	1.7%	0	0.0%	177	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	53	80.3%	13	19.7%	0	0.0%	66	100.0%
	Reperfusion therapy type	185	81.9%	0	0.0%	41	18.1%	226	100.0%
	ECG transmission (by ambulance service)	19	13.2%	0	0.0%	125	86.8%	144	100.0%
	Contraindication to reperfusion therapy reason (other)	5	100.0%	0	0.0%	0	0.0%	5	100.0%
Letterkenny University Hospital	Date of first phase 3 CR appointment	0	0.0%	0	0.0%	41	100.0%	41	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	42	93.3%	1	2.2%	2	4.4%	45	100.0%
	Smoking cessation counseling (for smokers)	16	100.0%	0	0.0%	0	0.0%	16	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	43	100.0%	0	0.0%	0	0.0%	43	100.0%

	Beta-blocker on discharge	43	100.0%	0	0.0%	0	0.0%	43	100.0%
	Survival status on discharge home	43	95.6%	0	0.0%	2	4.4%	45	100.0%
	Stroke during hospital stay	44	97.8%	0	0.0%	1	2.2%	45	100.0%
	Bleeding (following any intervention)	42	100.0%	0	0.0%	0	0.0%	42	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	2	100.0%	0	0.0%	0	0.0%	2	100.0%
	Reperfusion therapy type	45	100.0%	0	0.0%	0	0.0%	45	100.0%
	ECG transmission (by ambulance service)	23	67.6%	0	0.0%	11	32.4%	34	100.0%
	Contraindication to reperfusion therapy reason (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Mater Misericordiae University Hospital	Date of first phase 3 CR appointment	56	32.4%	0	0.0%	117	67.6%	173	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	234	66.5%	98	27.8%	20	5.7%	352	100.0%
	Smoking cessation counseling (for smokers)	99	73.9%	32	23.9%	3	2.2%	134	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	240	72.3%	92	27.7%	0	0.0%	332	100.0%
	Beta-blocker on discharge	241	72.6%	91	27.4%	0	0.0%	332	100.0%
	Survival status on discharge home	261	74.1%	91	25.9%	0	0.0%	352	100.0%
	Stroke during hospital stay	253	71.9%	99	28.1%	0	0.0%	352	100.0%
	Bleeding (following any intervention)	218	70.8%	90	29.2%	0	0.0%	308	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	108	97.3%	3	2.7%	0	0.0%	111	100.0%
	Reperfusion therapy type	322	91.5%	0	0.0%	30	8.5%	352	100.0%
	ECG transmission (by ambulance service)	39	20.9%	0	0.0%	148	79.1%	187	100.0%

	Contraindication to reperfusion therapy reason (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
St James's Hospital	Date of first phase 3 CR appointment	7	6.5%	0	0.0%	100	93.5%	107	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	125	32.1%	242	62.1%	23	5.9%	390	100.0%
	Smoking cessation counseling (for smokers)	145	96.0%	2	1.3%	4	2.6%	151	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	278	75.7%	89	24.3%	0	0.0%	367	100.0%
	Beta-blocker on discharge	282	76.8%	85	23.2%	0	0.0%	367	100.0%
	Survival status on discharge home	165	42.3%	225	57.7%	0	0.0%	390	100.0%
	Stroke during hospital stay	307	78.7%	83	21.3%	0	0.0%	390	100.0%
	Bleeding (following any intervention)	328	94.5%	19	5.5%	0	0.0%	347	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	60	44.4%	75	55.6%	0	0.0%	135	100.0%
	Reperfusion therapy type	356	91.3%	0	0.0%	34	8.7%	390	100.0%
	ECG transmission (by ambulance service)	125	56.1%	0	0.0%	98	43.9%	223	100.0%
	Contraindication to reperfusion therapy reason (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
University Hospital Galway	Date of first phase 3 CR appointment	61	39.4%	0	0.0%	94	60.6%	155	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	169	86.2%	1	0.5%	26	13.3%	196	100.0%
	Smoking cessation counseling (for smokers)	67	89.3%	0	0.0%	8	10.7%	75	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	156	96.9%	1	0.6%	4	2.5%	161	100.0%
	Beta-blocker on discharge	157	97.5%	2	1.2%	2	1.2%	161	100.0%
	Survival status on discharge home	162	82.7%	0	0.0%	34	17.3%	196	100.0%
	Stroke during hospital stay	170	86.7%	0	0.0%	26	13.3%	196	100.0%

	Bleeding (following any intervention)	151	95.0%	0	0.0%	8	5.0%	159	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	28	51.9%	23	42.6%	3	5.6%	54	100.0%
	Reperfusion therapy type	173	88.3%	0	0.0%	23	11.7%	196	100.0%
	ECG transmission (by ambulance service)	5	4.5%	0	0.0%	106	95.5%	111	100.0%
	Contraindication to reperfusion therapy reason (other)	6	100.0%	0	0.0%	0	0.0%	6	100.0%
University Hospital Limerick	Date of first phase 3 CR appointment	13	15.3%	0	0.0%	72	84.7%	85	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	176	93.1%	1	0.5%	12	6.3%	189	100.0%
	Smoking cessation counseling (for smokers)	81	95.3%	0	0.0%	4	4.7%	85	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	177	100.0%	0	0.0%	0	0.0%	177	100.0%
	Beta-blocker on discharge	177	100.0%	0	0.0%	0	0.0%	177	100.0%
	Survival status on discharge home	186	98.4%	2	1.1%	1	0.5%	189	100.0%
	Stroke during hospital stay	189	100.0%	0	0.0%	0	0.0%	189	100.0%
	Bleeding (following any intervention)	172	100.0%	0	0.0%	0	0.0%	172	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	4	80.0%	1	20.0%	0	0.0%	5	100.0%
	Reperfusion therapy type	173	91.5%	0	0.0%	16	8.5%	189	100.0%
	ECG transmission (by ambulance service)	105	78.9%	0	0.0%	28	21.1%	133	100.0%
	Contraindication to reperfusion therapy reason (other)	2	100.0%	0	0.0%	0	0.0%	2	100.0%
University Hospital Waterford	Date of first phase 3 CR appointment	6	16.7%	0	0.0%	30	83.3%	36	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	44	86.3%	2	3.9%	5	9.8%	51	100.0%

	Smoking cessation counseling (for smokers)	13	86.7%	0	0.0%	2	13.3%	15	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	43	95.6%	2	4.4%	0	0.0%	45	100.0%
	Beta-blocker on discharge	43	95.6%	2	4.4%	0	0.0%	45	100.0%
	Survival status on discharge home	49	96.1%	1	2.0%	1	2.0%	51	100.0%
	Stroke during hospital stay	48	94.1%	2	3.9%	1	2.0%	51	100.0%
	Bleeding (following any intervention)	32	97.0%	1	3.0%	0	0.0%	33	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	12	66.7%	6	33.3%	0	0.0%	18	100.0%
	Reperfusion therapy type	37	72.5%	0	0.0%	14	27.5%	51	100.0%
	ECG transmission (by ambulance service)	19	76.0%	1	4.0%	5	20.0%	25	100.0%
	Contraindication to reperfusion therapy reason (other)	1	100.0%	0	0.0%	0	0.0%	1	100.0%
Beaumont Hospital	Date of first phase 3 CR appointment	0	0.0%	0	0.0%	11	100.0%	11	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	12	92.3%	0	0.0%	1	7.7%	13	100.0%
	Smoking cessation counseling (for smokers)	8	100.0%	0	0.0%	0	0.0%	8	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	11	91.7%	1	8.3%	0	0.0%	12	100.0%
	Beta-blocker on discharge	12	100.0%	0	0.0%	0	0.0%	12	100.0%
	Survival status on discharge home	13	100.0%	0	0.0%	0	0.0%	13	100.0%
	Stroke during hospital stay	12	92.3%	1	7.7%	0	0.0%	13	100.0%
	Bleeding (following any intervention)	12	100.0%	0	0.0%	0	0.0%	12	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	5	83.3%	0	0.0%	1	16.7%	6	100.0%

	Reperfusion therapy type	12	92.3%	0	0.0%	1	7.7%	13	100.0%
	ECG transmission (by ambulance service)	1	33.3%	0	0.0%	2	66.7%	3	100.0%
	Contraindication to reperfusion therapy reason (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
St Vincent's University Hospital	Date of first phase 3 CR appointment	1	6.7%	0	0.0%	14	93.3%	15	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	15	100.0%	0	0.0%	0	0.0%	15	100.0%
	Smoking cessation counseling (for smokers)	4	100.0%	0	0.0%	0	0.0%	4	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	15	100.0%	0	0.0%	0	0.0%	15	100.0%
	Beta-blocker on discharge	15	100.0%	0	0.0%	0	0.0%	15	100.0%
	Survival status on discharge home	15	100.0%	0	0.0%	0	0.0%	15	100.0%
	Stroke during hospital stay	15	100.0%	0	0.0%	0	0.0%	15	100.0%
	Bleeding (following any intervention)	11	100.0%	0	0.0%	0	0.0%	11	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	3	100.0%	0	0.0%	0	0.0%	3	100.0%
	Reperfusion therapy type	15	100.0%	0	0.0%	0	0.0%	15	100.0%
	ECG transmission (by ambulance service)	0	0.0%	0	0.0%	4	100.0%	4	100.0%
	Contraindication to reperfusion therapy reason (other)	0	0.0%	0	0.0%	1	100.0%	1	100.0%
Tallaght University Hospital	Date of first phase 3 CR appointment	9	81.8%	0	0.0%	2	18.2%	11	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	12	85.7%	1	7.1%	1	7.1%	14	100.0%
	Smoking cessation counseling (for smokers)	4	80.0%	0	0.0%	1	20.0%	5	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	13	100.0%	0	0.0%	0	0.0%	13	100.0%
	Beta-blocker on discharge	13	100.0%	0	0.0%	0	0.0%	13	100.0%

	Survival status on discharge home	14	100.0%	0	0.0%	0	0.0%	14	100.0%
	Stroke during hospital stay	14	100.0%	0	0.0%	0	0.0%	14	100.0%
	Bleeding (following any intervention)	11	100.0%	0	0.0%	0	0.0%	11	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	1	100.0%	0	0.0%	0	0.0%	1	100.0%
	Reperfusion therapy type	13	92.9%	0	0.0%	1	7.1%	14	100.0%
	ECG transmission (by ambulance service)	3	75.0%	0	0.0%	1	25.0%	4	100.0%
	Contraindication to reperfusion therapy reason (other)	0	0.0%	0	0.0%	1	100.0%	1	100.0%
Total	Date of first phase 3 CR appointment	196	25.1%	0	0.0%	586	74.9%	782	100.0%
	Referral to cardiac rehabilitation (CR) phase 3	1017	68.2%	363	24.3%	111	7.4%	1491	100.0%
	Smoking cessation counseling (for smokers)	525	88.5%	37	6.2%	31	5.2%	593	100.0%
	Angiotensin converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB) on discharge	1175	85.8%	191	13.9%	4	0.3%	1370	100.0%
	Beta-blocker on discharge	1183	86.4%	185	13.5%	2	0.1%	1370	100.0%
	Survival status on discharge home	1128	75.7%	325	21.8%	38	2.5%	1491	100.0%
	Stroke during hospital stay	1275	85.5%	188	12.6%	28	1.9%	1491	100.0%
	Bleeding (following any intervention)	1151	90.5%	113	8.9%	8	0.6%	1272	100.0%
	Discharge diagnosis (other)	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Late reperfusion therapy reason (if reperfusion therapy outside targets)	276	68.8%	121	30.2%	4	1.0%	401	100.0%
	Reperfusion therapy type	1331	89.3%	0	0.0%	160	10.7%	1491	100.0%
	ECG transmission (by ambulance service)	339	39.1%	1	0.1%	528	60.8%	868	100.0%
	Contraindication to reperfusion therapy reason (other)	14	87.5%	0	0.0%	2	12.5%	16	100.0%

APPENDIX 9: SUPPLEMENTARY FREQUENCY TABLES

TABLE 9.1: ALTERNATIVE DISCHARGE DIAGNOSIS, BY HOSPITAL (n=171)

	NSTEMI		Unstable Angina		Pericarditis		Myocarditis		Takosubo		Non Cardiac Chest Pain		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Cork University Hospital	0	0.0%	0	0.0%	~	*	~	*	~	*	~	*	9	5.3%
Letterkenny University Hospital	~	*	0	0.0%	~	*	~	*	~	*	~	*	12	7.0%
Mater Misericordiae University Hospital	16	47.1%	~	*	15	41.7%	~	*	7	30.4%	21	32.8%	65	38.0%
St James's Hospital	0	0.0%	0	0.0%	~	*	~	*	~	*	~	*	12	7.0%
University Hospital Galway**	~	*	0	0.0%	~	*	0	0.0%	~	*	10	15.6%	23	13.5%
University Hospital Limerick	~	*	~	*	~	*	0	0.0%	~	*	22	34.4%	32	18.7%
University Hospital Waterford**	~	*	~	*	~	*	0	0.0%	~	*	6	9.4%	14	8.2%
Beaumont Hospital**	~	*	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	~	*
St Vincent's University Hospital	~	*	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	~	*
Tallaght University Hospital	~	*	0	0.0%	0	0.0%	0	0.0%	~	*	0	0.0%	~	*
Total	34	100.0%	6	100.0%	36	100.0%	8	100.0%	23	100.0%	64	100.0%	171	100.0%

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** Coverage was below 80%

TABLE 9.2: LOCATION WHERE FIRST POSITIVE ELECTROCARDIOGRAM WAS RECORDED (N=1491)

	12 lead ECG performed by ambulance personnel		12 lead ECG performed in ED		12 lead ECG performed in GP office		12 lead ECG performed other location such as hospital ward/CCU etc		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Cork University Hospital	126	55.8%	89	39.4%	*	3*	~	*	0	0.0%	226	100.0%
Letterkenny University Hospital	33	73.3%	9	20.0%	~	*	~	*	0	0.0%	45	100.0%
Mater Misericordiae University Hospital	190	54.0%	139	39.5%	~	*	*	*	0	0.0%	352	100.0%
St James's Hospital	216	55.4%	156	40.0%	~	*	*	*	0	0.0%	390	100.0%
University Hospital Galway**	111	56.6%	59	30.1%	18	9.2%	*	*	~	*	196	100.0%
University Hospital Limerick	115	60.8%	61	32.3%	*	*	~	*	0	0.0%	189	100.0%
University Hospital Waterford**	20	39.2%	25	49.0%	~	*	~	*	0	0.0%	51	100.0%
Beaumont Hospital**	~	*	*	*	0	0.0%	0	0.0%	0	0.0%	13	100.0%
St Vincent's University Hospital	~	*	12	80.0%	0	0.0%	~	*	0	0.0%	15	100.0%
Tallaght University Hospital	~	*	12	85.7%	0	0.0%	~	*	0	0.0%	14	100.0%
Total	815	54.7%	573	38.4%	46	3.1%	55	3.7%	~	*	1491	100.0%

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TABLE 9.3: CLINICAL STATUS ON ARRIVAL AT A PERCUTANEOUS CORONARY INTERVENTION CENTRE FOR PATIENTS BROUGHT FOR PRIMARY PERCUTANEOUS CORONARY INTERVENTION, BY MODE OF ARRIVAL (n=1271)¹

		Stable		Cardiogenic shock		Resuscitated arrest		Cardiac arrest and died		Other/unknown		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Cork University Hospital	Direct via ambulance	105	73.4%	*	*	11	7.7%	0	0.0%	*	*	143	100.0%
	Transfer from other hospital	22	88.0%	~	*	0	0.0%	0	0.0%	~	*	25	100.0%
	Total	127	75.6%	12	7.1%	11	6.5%	0	0.0%	18	10.7%	168	100.0%
Letterkenny University Hospital	Direct via ambulance	*	*	0	0.0%	~	*	0	0.0%	0	0.0%	34	100.0%
	Total	*	*	0	0.0%	~	*	0	0.0%	0	0.0%	34	100.0%
Mater Misericordiae University Hospital	Direct via ambulance	160	85.6%	~	*	19	10.2%	~	*	~	*	187	100.0%
	Transfer from other hospital	118	88.1%	~	*	*	*	0	0.0%	0	0.0%	134	100.0%
	Total	278	86.6%	9	2.8%	31	9.7%	~	*	~	*	321	100.0%
St James's Hospital	Direct via ambulance	187	84.2%	*	*	20	9.0%	0	0.0%	*	*	222	100.0%
	Transfer from other hospital	98	85.2%	~	*	10	8.7%	0	0.0%	~	*	115	100.0%
	Total	285	84.6%	11	3.3%	30	8.9%	0	0.0%	11	3.3%	337	100.0%
University Hospital Galway**	Direct via ambulance	96	86.5%	~	*	6	5.4%	0	0.0%	~	*	111	100.0%
	Transfer from other hospital	*	*	0	0.0%	0	0.0%	0	0.0%	~	*	41	100.0%
	Total	136	89.5%	~	*	6	3.9%	0	0.0%	~	*	152	100.0%
University Hospital Limerick	Direct via ambulance	110	82.7%	*	*	*	*	0	0.0%	0	0.0%	133	100.0%
	Transfer from other hospital	16	88.9%	~	*	~	*	0	0.0%	0	0.0%	18	100.0%
	Total	126	83.4%	15	9.9%	10	6.6%	0	0.0%	0	0.0%	151	100.0%
University Hospital Waterford**	Direct via ambulance	21	87.5%	~	*	0	0.0%	0	0.0%	~	*	24	100.0%
	Transfer from other hospital	13	86.7%	0	0.0%	~	*	0	0.0%	~	*	15	100.0%
	Total	34	87.2%	~	*	~	*	0	0.0%	~	*	39	100.0%
Beaumont Hospital**	Direct via ambulance	~	*	0	0.0%	0	0.0%	0	0.0%	0	0.0%	~	*
	Total	~	*	0	0.0%	0	0.0%	0	0.0%	0	0.0%	~	*
St Vincent's University Hospital	Direct via ambulance	~	*	0	0.0%	0	0.0%	0	0.0%	~	*	~	*
	Transfer from other hospital	~	*	0	0.0%	~	*	0	0.0%	0	0.0%	~	*
	Total	~	*	0	0.0%	~	*	0	0.0%	~	*	~	*
Tallaght University Hospital	Direct via ambulance	~	*	0	0.0%	0	0.0%	0	0.0%	0	0.0%	~	*
	Transfer from other hospital	~	*	0	0.0%	0	0.0%	0	0.0%	0	0.0%	~	*
	Total	~	*	0	0.0%	0	0.0%	0	0.0%	0	0.0%	~	*
Total	Direct via ambulance	719	83.1%	45	5.2%	69	8.0%	~	*	*	*	865	100.0%
	Transfer from other hospital	310	88.1%	8	2.3%	25	7.1%	0	0.0%	9	2.6%	352	100.0%

¹ Patients who had hospital and pre-hospital thrombolysis were excluded from this analysis

	Total	1029	84.6%	53	4.4%	94	7.7%	~	*	*	*	121 7	100.0 %
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* Further suppression required in order to prevent disclosure of five cases or fewer

** Coverage was below 80%

TABLE 9.4: REASONS FOR CONTRAINDICATION TO REPERFUSION THERAPY, BY SEX (n=178)

		Male		Female		Total	
		N	%	N	%	N	%
Directly admitted to a PCI centre	Presented too late	69	88.5%	25	89.3%	94	88.7%
	Recent cerebrovascular accident	0	0.0%	~	*	~	*
	Other	9	11.5%	~	*	*	*
	Total	78	100.0%	28	100.0%	106	100.0%
Transferred to PCI Centre	Presented too late	43	89.6%	18	100.0%	61	92.4%
	Recent surgery	~	*	0	0.0%	~	*
	History of bleeding	~	*	0	0.0%	~	*
	Other	~	*	0	0.0%	~	*
	Total	48	100.0%	18	100.0%	66	100.0%
Other/unknown	Presented too late	~	*	~	*	~	*
	Recent cerebrovascular accident	~	*	0	0.0%	~	*
	Total	~	*	~	*	6	100.0%
Total	Presented too late	115	88.5%	45	93.8%	160	89.9%
	Recent surgery	~	*	0	0.0%	~	*
	History of bleeding	~	*	0	0.0%	~	*
	Recent cerebrovascular accident	~	*	~	*	~	*
	Other	12	9.2%	~	*	14	7.9%
	Total	130	100.0%	48	100.0%	178	100.0%

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TABLE 9.5: DOOR TO BALLOON TIME FOR PATIENTS DIRECTLY ADMITTED OR TRANSFERRED TO A PERCUTANEOUS CORONARY INTERVENTION CENTRE, BY HOSPITAL (n=1147)

		Directly admitted to a PCI centre	Transferred to PCI Centre	Total
Cork University Hospital	N	142	11	153
	Mean	71.79	24.55	68.39
	Median	45.00	23.00	43.00
	Percentile 25	26.00	16.00	26.00
	Percentile 75	82.00	33.00	78.00
Letterkenny University Hospital	N	32	0	32
	Mean	25.72		25.72
	Median	24.50		24.50
	Percentile 25	12.50		12.50
	Percentile 75	38.00		38.00
Mater Misericordiae University Hospital	N	194	108	302
	Mean	36.92	22.99	31.94
	Median	23.00	18.00	21.00
	Percentile 25	16.00	13.00	15.00
	Percentile 75	40.00	25.00	35.00

St James's Hospital	N	215	95	310
	Mean	28.65	34.85	30.55
	Median	23.00	25.00	23.00
	Percentile 25	17.00	19.00	18.00
	Percentile 75	32.00	36.00	33.00
University Hospital Galway**	N	109	26	135
	Mean	62.01	134.35	75.94
	Median	46.00	35.50	42.00
	Percentile 25	21.00	20.00	20.00
	Percentile 75	86.00	86.00	86.00
University Hospital Limerick	N	137	16	153
	Mean	49.66	28.19	47.42
	Median	24.00	18.50	22.00
	Percentile 25	15.00	7.50	15.00
	Percentile 75	53.00	28.50	52.00
University Hospital Waterford**	N	21	10	31
	Mean	49.57	46.80	48.68
	Median	45.00	33.50	40.00
	Percentile 25	25.00	16.00	18.00
	Percentile 75	75.00	52.00	73.00
Beaumont Hospital**	N	7	0	7
	Mean	143.71		143.71
	Median	89.00		89.00
	Percentile 25	45.00		45.00
	Percentile 75	243.00		243.00
St Vincent's University Hospital	N	*	~	10
	Mean	149.89	60.00	140.90
	Median	103.00	60.00	88.50
	Percentile 25	70.00	60.00	66.00
	Percentile 75	200.00	60.00	200.00
Tallaght University Hospital	N	*	~	11
	Mean	194.20	15.00	177.91
	Median	89.00	15.00	86.00
	Percentile 25	83.00	15.00	71.00
	Percentile 75	149.00	15.00	149.00
Total	N	876	268	1144
	Mean	49.36	39.37	47.02
	Median	28.00	21.00	25.00
	Percentile 25	18.00	15.00	17.00
	Percentile 75	52.00	34.00	48.00

~ Denotes five cases or fewer

** Coverage was below 80%

TABLE 9.6: INCIDENCE OF BLEEDING BY REPERFUSION TYPE (n=1315)²

	Thrombolysis		Primary PCI		No reperfusion required		Total	
	N	%	N	%	N	%	N	%
None	*	*	1046	89.0%	*	*	1177	89.5%
Intracranial haemorrhage	0	0.0%	~	*	0	0.0%	~	*
Any bleed (haemoglobin fall of <3 g to >5 g)	~	*	*	*	0	0.0%	*	*
Unknown	~	*	118	10.0%	~	*	126	9.6%
Total	81	100.0%	1175	100.0%	59	100.0%	1315	100.0%

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² Cases that were identified as contraindicated and had a reperfusion therapy recorded (n=16), cases that did not have reperfusion therapy information recorded (n=159) were excluded.

TABLE 9.7: INCIDENCE OF STROKE BY REPERFUSION TYPE (n=1315)³

	Thrombolysis		Primary PCI		No reperfusion required		Total	
	N	%	N	%	N	%	N	%
No	*	*	973	82.8%	52	88.1%	1102	83.8%
Yes – ischaemic	0	0.0%	17	1.4%	0	0.0%	17	1.3%
Yes – haemorrhagic	0	0.0%	6	0.5%	0	0.0%	6	0.5%
Unknown	~	*	179	15.2%	*	*	190	14.4%
Total	81	100.0%	1175	100.0%	59	100.0%	1315	100.0%

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TABLE 9.8: PROPORTION OF PATIENTS PRESCRIBED SECONDARY PREVENTION MEDICATION ON DISCHARGE, BY HOSPITAL

		Yes		No		Contraindicated		Total	
		N	%	N	%	N	%	N	%
Cork University Hospital	ACEI or ARB	148	74.4%	~	*	*	*	199	100.0%
	Statin	195	98.0%	~	*	~	*	199	100.0%
	Betablocker	186	93.0%	~	*	*	6.5%	200	100.0%
	Aspirin	191	94.1%	~	*	*	*	203	100.0%
	Second anti-platelet agent	194	95.6%	~	*	*	*	203	100.0%
Letterkenny University Hospital	ACEI or ARB	*	*	~	*	0	0.0%	43	100.0%
	Statin	43	100.0%	0	0.0%	0	0.0%	43	100.0%
	Betablocker	43	100.0%	0	0.0%	0	0.0%	43	100.0%
	Aspirin	43	100.0%	0	0.0%	0	0.0%	43	100.0%
	Second anti-platelet agent	43	100.0%	0	0.0%	0	0.0%	43	100.0%
Mater Misericordiae University Hospital	ACEI or ARB	187	77.9%	*	*	~	*	240	100.0%
	Statin	*	*	~	*	0	0.0%	241	100.0%
	Betablocker	218	90.5%	*	*	~	*	241	100.0%
	Aspirin	*	*	0	0.0%	~	*	246	100.0%
	Second anti-platelet agent	235	95.5%	~	*	*	*	246	100.0%
St James's Hospital	ACEI or ARB	*	*	0	0.0%	~	*	278	100.0%
	Statin	*	*	~	*	0	0.0%	335	100.0%
	Betablocker	*	*	~	*	~	*	282	100.0%
	Aspirin	*	*	~	*	~	*	366	100.0%
	Second anti-platelet agent	*	*	~	*	0	0.0%	366	100.0%
University Hospital Galway**	ACEI or ARB	148	94.9%	8	5.1%	0	0.0%	156	100.0%
	Statin	152	96.2%	6	3.8%	0	0.0%	158	100.0%
	Betablocker	150	95.5%	7	4.5%	0	0.0%	157	100.0%
	Aspirin	150	94.9%	8	5.1%	0	0.0%	158	100.0%
	Second anti-platelet agent	*	*	~	*	0	0.0%	159	100.0%
University Hospital Limerick	ACEI or ARB	158	89.3%	~	*	*	*	177	100.0%
	Statin	177	100.0%	0	0.0%	0	0.0%	177	100.0%
	Betablocker	159	89.8%	~	*	*	*	177	100.0%
	Aspirin	*	*	~	*	0	0.0%	177	100.0%
	Second anti-platelet agent	*	*	0	0.0%	~	*	177	100.0%
University Hospital Waterford**	ACEI or ARB	*	*	~	*	0	0.0%	43	100.0%
	Statin	*	*	0	0.0%	~	*	44	100.0%
	Betablocker	*	*	0	0.0%	~	*	43	100.0%
	Aspirin	45	100.0%	0	0.0%	0	0.0%	45	100.0%
	Second anti-platelet agent	45	100.0%	0	0.0%	0	0.0%	45	100.0%
	ACEI or ARB	11	100.0%	0	0.0%	0	0.0%	11	100.0%

³ Cases that were identified as contraindicated and had a reperfusion therapy recorded (n=16), cases that did not have reperfusion therapy information recorded (n=159) were excluded.

Beaumont Hospital**	Statin	12	100.0%	0	0.0%	0	0.0%	12	100.0%
	Betablocker	12	100.0%	0	0.0%	0	0.0%	12	100.0%
	Aspirin	12	100.0%	0	0.0%	0	0.0%	12	100.0%
	Second anti-platelet agent	12	100.0%	0	0.0%	0	0.0%	12	100.0%
St Vincent's University Hospital	ACEI or ARB	9	60.0%	6	40.0%	0	0.0%	15	100.0%
	Statin	15	100.0%	0	0.0%	0	0.0%	15	100.0%
	Betablocker	*	*	~	*	0	0.0%	15	100.0%
	Aspirin	*	*	~	*	0	0.0%	15	100.0%
	Second anti-platelet agent	15	100.0%	0	0.0%	0	0.0%	15	100.0%
Tallaght University Hospital	ACEI or ARB	*	*	~	*	0	0.0%	13	100.0%
	Statin	*	*	~	*	0	0.0%	13	100.0%
	Betablocker	*	*	~	*	0	0.0%	13	100.0%
	Aspirin	*	*	~	*	0	0.0%	13	100.0%
	Second anti-platelet agent	*	*	~	*	0	0.0%	13	100.0%
Total	ACEI or ARB	1028	87.5%	77	6.6%	70	6.0%	1175	100.0%
	Statin	1222	98.8%	10	0.8%	5	0.4%	1237	100.0%
	Betablocker	1110	93.8%	39	3.3%	34	2.9%	1183	100.0%
	Aspirin	1252	98.0%	14	1.1%	12	0.9%	1278	100.0%
	Second anti-platelet agent	1245	97.3%	14	1.1%	20	1.6%	1279	100.0%

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APPENDIX 10: SPECIFICATIONS FOR COMPOSITE VARIABLES

FIGURE 4.5: PROPORTION OF PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION WITH PRIOR CORONARY HEART DISEASE, BY SEX AND AGE GROUP

DATA POINT	SPECIFICATION
Coronary artery disease	A diagnosis of any of the following: prior MI, prior angina, prior PCI, or prior CABG.

FIGURE Error! No text of specified style in document..21: PREVALENCE OF RISK FACTORS FOR PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION, BY SEX AND AGE GROUP

DATA POINT	SPECIFICATION
Risk factor	<p>If patient has a previous medical history of one or more:</p> <ul style="list-style-type: none">• prior cardiovascular disease (defined in Figure 4.5)• diabetes mellitus• current smoker• previous hypercholesterolaemia• previous hypertension

FIGURE Error! No text of specified style in document..22: PROPORTION OF PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION WITH A SYMPTOM ONSET TO CALL FOR HELP INTERVAL WITHIN 60 MINUTES, BY SEX

DATA POINT	SPECIFICATION
Symptom onset to call for help	<p>If patient arrived at a PCI centre directly by ambulance</p> <ul style="list-style-type: none">• Time interval in minutes was calculated based on date and time of symptom onset and date and time of call for help• Admissions for whom time information was not recorded or was recorded incorrectly were recoded as “Unknown”: - if time interval was more than 1 week apart, or if date and time of call for help was recorded as before date and time of symptom onset.

FIGURE Error! No text of specified style in document..23: PROPORTION OF PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION WHO ARRIVED DIRECTLY BY AMBULANCE WITHIN THE TARGET TIME OF 90 MINUTES, BY PERCUTANEOUS CORONARY INTERVENTION CENTRE AND YEAR

DATA POINT	SPECIFICATION
First medical contact (FMC) for patients who arrived at a PCI centre directly by ambulance	<ul style="list-style-type: none">• Only includes patients who arrived at a PCI centre directly by ambulance• Only includes patients who had their electrocardiogram (ECG) performed by ambulance personnel• Patients who had hospital or pre-hospital thrombolysis performed were excluded• Time interval in minutes was calculated based on date and time of first positive ECG and arrival at the PCI centre

	<ul style="list-style-type: none"> • Admissions for whom time information was not recorded or was recorded incorrectly were recoded as “Unknown”: - if time interval was more than 24 hours apart, or if date and time of arrival at the PCI centre was recorded as before date and time of first positive ECG.
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FIGURE **Error! No text of specified style in document.**24: PROPORTION OF PATIENTS WITH AN ST ELEVATION MYOCARDIAL INFARCTION WHO WERE TRANSFERRED, WHO ARRIVED WITHIN THE TARGET TIME OF 90 MINUTES, BY PERCUTANEOUSCORONARY INTERVENTION CENTRE

DATA POINT	SPECIFICATION
FMC for patients who were transferred to a PCI centre	<ul style="list-style-type: none"> • Only includes patients who were transferred to a PCI centre • Patients who had hospital or pre-hospital thrombolysis performed were excluded • Time interval in minutes was calculated based date and time of first positive ECG and arrival at the PCI centre • Admissions for whom time information was not recorded or was recorded incorrectly were recoded as “Unknown”: - if time interval was more than 24 hours apart if date and time of arrival at the PCI centre was recorded as before date and time of first positive ECG.

FIGURE **Error! No text of specified style in document.**25: REPERFUSION THERAPY TYPE, BY REFERRAL SOURCE AND PCI CENTRE

DATA POINT	SPECIFICATION
Directly admitted	<p>Only includes patients who:</p> <ul style="list-style-type: none"> • arrived at a PCI centre directly via ambulance • were inpatients in a PCI centre • self-presented at a PCI centre
Transferred	Only includes patients who were transferred to a PCI centre from another hospital.

FIGURE Error! No text of specified style in document..26: DOOR TO BALLOON TIME FOR PATIENTS DIRECTLY ADMITTED OR TRANSFERRED TO A PERCUTANEOUS CORONARY INTERVENTION CENTRE, BY HOSPITAL AND

DATA POINT	REFERRAL SOURCE	SPECIFICATION
Door to balloon (DTB) time for patients admitted directly to a PCI centre	DTB time for patients who arrived at a PCI centre directly by ambulance, self-presented to a PCI centre or were transferred to a PCI centre	<ul style="list-style-type: none"> • Only includes patients who arrived at a PCI centre directly by ambulance, self-presented to a PCI centre, or were transferred to a PCI centre • Patients who had contraindications to PCI therapy were excluded • Only includes patients who had primary PCI therapy performed • Time interval in minutes was calculated based on date and time of arrival at the PCI centre and date and time of primary PCI reperfusion • Admissions for whom time information was not recorded or was recorded incorrectly were recoded as “Unknown”: - <ul style="list-style-type: none"> ○ For patients who arrived at a PCI centre directly by ambulance, or self-presented, if time interval was more than 24 hours apart, or if date and time of primary PCI reperfusion was recorded as before date and time of arrival at the PCI centre. ○ For patients who were transferred to a PCI centre, if time interval was more than 48 hours apart, or if date and time of primary PCI reperfusion was recorded as before date and time of arrival at the PCI centre.
	DTB time for patients who were already inpatients in a PCI centre	<ul style="list-style-type: none"> • Only includes patients who were already inpatients • Patients who had contraindications to PCI therapy were excluded • Only includes patients who had primary PCI therapy performed • Time interval in minutes was calculated based on date and time of first positive ECG and date and time of primary PCI reperfusion • Admissions for whom time information was not recorded or was recorded incorrectly were recoded as “Unknown”: - if time interval was more than 24 hours apart - if date and time of primary PCI reperfusion

		was recorded as before date and time of first positive ECG.
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FIGURE **Error! No text of specified style in document..27**: PROPORTION OF PATIENTS WHO RECEIVED TIMELY PRIMARY PERCUTANEOUS CORONARY INTERVENTION AND THROMBOLYSIS REPERFUSION BY HOSPITAL AND

FIGURE **Error! No text of specified style in document..28**: PROPORTION OF PATIENTS WHO RECEIVED TIMELY REPERFUSION WITH THROMBOLYSIS AND

FIGURE **Error! No text of specified style in document..29**: PROPORTION OF TIMELY PRIMARY PERCUTANEOUS CORONARY INTERVENTION FOR PATIENTS ADMITTED DIRECTLY OR TRANSFERRED TO A PERCUTANEOUS CORONARY INTERVENTION CENTRE, BY PCI CENTRE AND

FIGURE **Error! No text of specified style in document..30**: PROPORTION OF TIMELY PRIMARY PERCUTANEOUS CORONARY INTERVENTION FOR PATIENTS WHO WERE TRANSFERRED TO A PERCUTANEOUS CORONARY INTERVENTION CENTRE, BY REFERRING HOSPITAL AND

TABLE **Error! No text of specified style in document..1**: FIRST MEDICAL CONTACT TO BALLOON (FMCTB) BY REFERRAL SOURCE, MEDIAN AND IQR

DATA POINT	REFERRAL SOURCE	SPECIFICATION
Timeliness of thrombolysis (Figure 6.5)	Timeliness of pre-hospital thrombolysis	<ul style="list-style-type: none"> • Only includes patients who had pre-hospital thrombolysis • Timely thrombolysis is defined as within 30 minutes or less • Time interval in minutes was calculated based on date and time of first positive ECG and date and time of thrombolysis • Admissions for whom time information was not recorded or was recorded incorrectly were recoded as "Unknown": - if date and time of thrombolysis was recorded as before date and time of first positive ECG.
	Timeliness of hospital thrombolysis for inpatients and inpatient transfers from another hospital	<ul style="list-style-type: none"> • Only includes patients who had hospital thrombolysis and were inpatients or inpatients transferred from another hospital • Timely thrombolysis is defined as within 30 minutes or less • Time interval in minutes was calculated based on date and time of first positive ECG and date and time of thrombolysis • Admissions for whom time information was not recorded or was recorded incorrectly were recoded as "Unknown": - if date and time of thrombolysis was recorded as before date and time of first positive ECG.

	Timeliness of hospital thrombolysis for those who were not inpatients	<p>Only includes patients who are not defined as inpatients</p> <ul style="list-style-type: none"> • Timely thrombolysis is defined as within 30 minutes or less • Time interval in minutes was calculated based on date and time of arrival at the first hospital and date and time of thrombolysis • Admissions for whom time information was not recorded or was recorded incorrectly were recoded as "Unknown": - if date and time of thrombolysis was recorded as before date and time of arrival at the first hospital.
Timeliness of primary PCI reperfusion (Figure 6.6)	Timeliness for patients who arrived at a PCI centre directly by ambulance, who self-presented to a PCI centre, who were already inpatients, or who transferred to a PCI centre	<ul style="list-style-type: none"> • Only includes patients who arrived at a PCI centre directly by ambulance, who self-presented at a PCI centre, who were already inpatient, or who were transferred to a PCI centre • Patients who had contraindications to PCI therapy were excluded • Only includes patients who had primary PCI therapy performed • Timely primary PCI reperfusion is defined as within 120 minutes or less • Time interval in minutes was calculated based on date and time of first positive ECG and date and time of primary PCI reperfusion • Admissions for whom time information was not recorded or was recorded incorrectly were recoded as "Unknown": - if time interval was more than 24 hours apart - if date and time of primary PCI reperfusion was recorded as before date and time of first positive ECG.

FIGURE Error! No text of specified style in document..31: TYPE OF ARTERIAL ACCESS, BY HOSPITAL

DATA POINT	SPECIFICATION
Radial access	<p>If artery access was obtained in:</p> <ul style="list-style-type: none"> • Radial
Other	<p>If artery access was obtained in:</p> <ul style="list-style-type: none"> • Femoral • Brachial

FIGURE Error! No text of specified style in document..32: PERCENTAGE COMPLETENESS OF SURVIVAL STATUS AT 30 DAYS

DATA POINT	SPECIFICATION
30-day mortality	<p>Includes the following data points:</p> <ul style="list-style-type: none"> • survival status on discharge home • survival status at 30 days post-MI.

FIGURE Error! No text of specified style in document..33: DISCHARGE DESTINATION FROM PERCUTANEOUS CORONARY INTERVENTION CENTRES, BY SEX AND HOSPITAL

DATA POINT	SPECIFICATION
Home	If patient's discharge destination was home.
Transferred	If patient's discharge destination was: Transfer to Hospital – Emergency; Transfer to Hospital - Non Emergency; Transfer to Non-Acute Hospital not in HIPE Hospital Listing – Emergency; Transfer to Non-Acute Hospital not in HIPE Hospital Listing - Non Emergency
Other	If patient's discharge destination was: Self-discharge; Nursing home, convalescent home or long stay accommodation; Transfer to psychiatric hospital/unit; Died with post mortem; Died no post mortem; Transfer to rehabilitation facility (not in HIPE Hospital Listing); Hospice (not in HIPE Hospital Listing); Prison; Absconded; Other (e.g. Foster care); Temporary place of residence (e.g. hotel)