Supplemental methods

Data validation processes in the AMI Code registry

1. Automatic data validation processes to identify and feed-back missing data and incongruities.

2. Periodic data validation process every 3-6 months:

   Since year 2011 this process was automated. The system automatically detects missing information in key variables and the identification of AMI codes that were activated by the emergency services (before admission) and were not included in the registry. Feed back for data validation is sent every 3-6 months for amendment or justification to the person responsible for data entry at each AMI Code Hospital.

   Since year 2015 the automated process can be managed directly at any time by the person responsible for data entry in each hospital.

3. Specific studies:

   In 2012 data were evaluated for **exhaustiveness**: all AMI cases consecutively admitted in 43 hospitals in Catalonia (10 AMI Code hospitals and 32 no AMI Code hospitals) during a 3 months period were registered and compared with the episodes registered in the AMI Code registry. Between 88-92% of STEACS episodes were included in the AMI Code registry.

   In 2013 concordance of the information between the AMI Code registry and the information from clinical records was assessed. 330 cases were analyzed and concordance was good for all key variables and there were no differences between hospitals.

Supplemental tables

Supplemental table 1. ICD9 codes used for the identification of conditions and diseases present at index admission and for the identification of events during follow up.

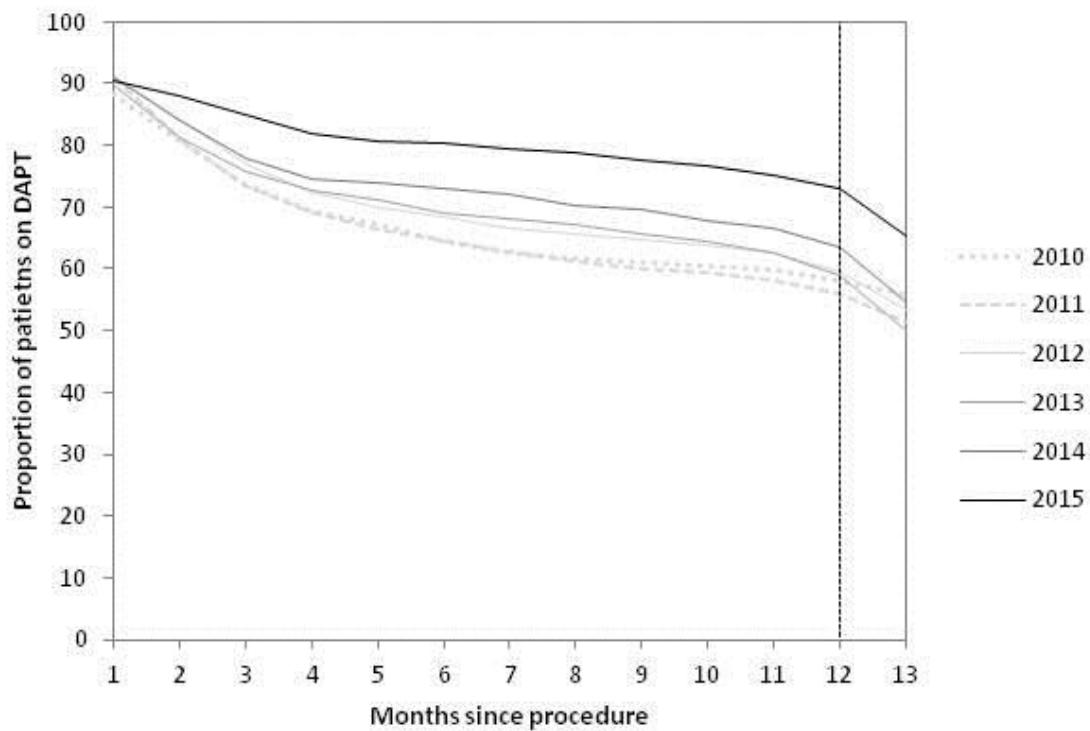| Disease or condition	ICD9 diagnostic or procedure code
Heart failure	428.0, 428.1, 428.22, 428.23, 428.3, 428.32, 428.33, 428.41, 428.43
Renal disease	585*
Neoplasia	140-239
Anemia	280-285
Chronic obstructive pulmonary disease	491-492, 494*, 496*
Peripheral arterial disease	440.2, 440.3, 440.4
Atrial fibrillation	427.3*
Events during follow up	
Acute myocardial infarction	410*, except: 410.*2
Ischemic stroke	433*, 434*, except: 433.*0, 434.*0
Haemorrhagic stroke	430*, 431*, 432*
Intraocular bleeding	362.81, 363.6, 363.61, 363.62, 376.32, 377.42, 379.23
Digestive bleeding	530.21, 530.7, 530.82, 531.0, 531.2, 531.4, 531.6, 532.0, 532.2, 532.4, 532.6, 533.0, 533.2, 533.4, 534.4, 534.6, 535.01, 535.11,535.21, 535.31, 535.41, 535.51, 535.61, 535.71, 537.83, 562.02, 562.03, 562.12, 562.13, 569.3, 569.85, 578.1, 578.9
Other bleeding	246.3, 459.0, 602.1, 784.8, 596.7, 599.7, 852*, 997.02, 998.1,
Endoscopic treatment	444.3, 454.2, 454.3
Transfusion	990.4

Supplemental table 2. ATC codes used for the identification of drug treatment

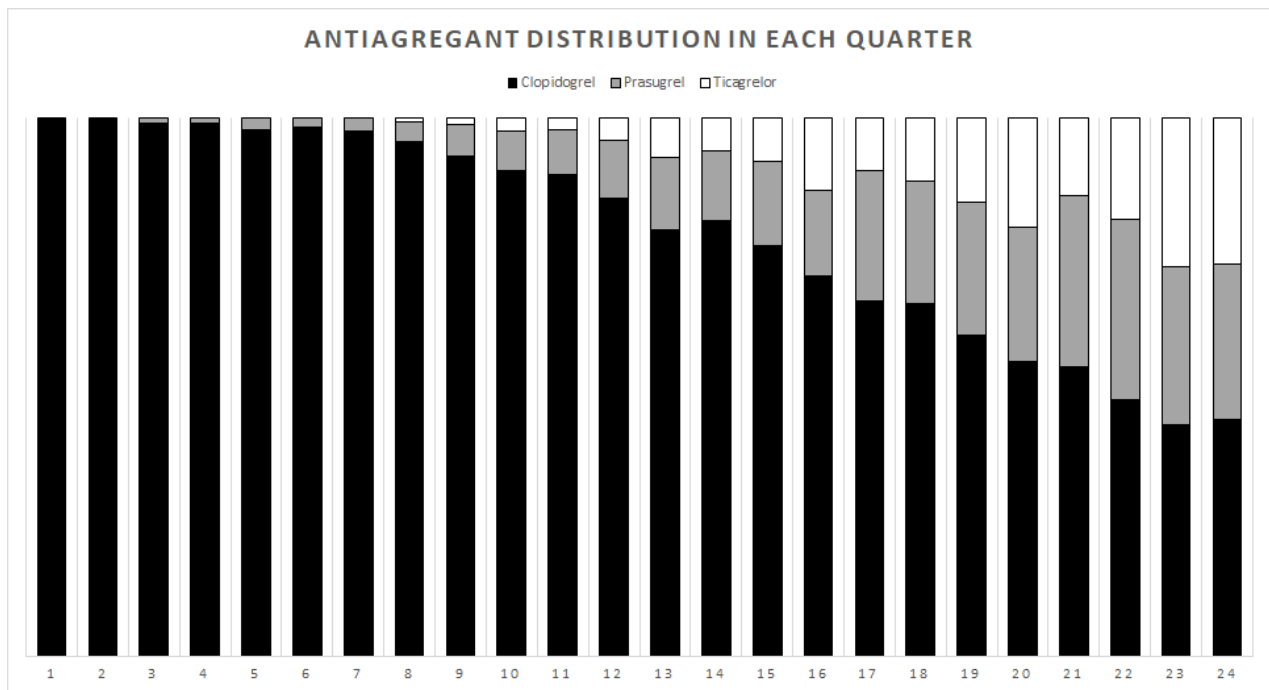| Drug treatment	ATC code
ASA	B01AC06, N02BA01, B01AC30
Ticlopidine	B01AC05
Clopidogrel	B01AC04
Prasugrel	B01AC22
Ticagrelor	B01AC24
Dabigatran etexilate	B01AE07
Rivaroxaban	B01AF01
Apixaban	B01AF02
Beta-blocker	C07
ACE inhibitor	C09
Statins	C10AA

Supplemental table 3. Factors associated with a persistence of at least 12 months as assessed with interrupted time series logistic regression model. Results of sensitivity analyses.

Fixed Effects	Original Model			Discharged home			Non-ischemic or haemorrhagic events		
	OR	CI95%	P value	OR	CI95%	P value	OR	CI95%	P value
Drug eluting stent	1.90	1.50 - 2.40	<0.001	2.00	1.43 - 2.81	<0.001	1.92	1.54 – 2.39	<0.001
Number of Stents	1.22	1.13 - 1.32	<0.001	1.10	0.98 – 1.24	0.117	1.24	1.15 – 1.35	<0.001
Antiplatelet agent at discharge (Ref. Clopidogrel)									
Prasugrelor	1.59	0.88 – 1.26	<0.001	1.72	1.34 – 2.20	<0.001	1.63	1.38 – 1.91	<0.001
Ticagrelor	1.05	1.36 – 1.86	0.575	1.06	0.81 – 1.38	0.665	1.05	0.87 – 1.27	0.614
Recommendation at PCI hospital discharge (Ref. 1 month)									
<12 months	1.67	0.89 - 3.14	0.110	0.98	0.51 – 1.88	0.957	2.03	0.97 – 4.24	0.059
≥ 12 months	5.76	3.26 - 10.2	<0.001	4.29	2.45 – 7.51	<0.001	7.22	4.09 – 12.8	<0.001
unknown	2.25	0.84 - 6.01	0.107	2.81	1.33 – 5.93	0.007	2.62	0.95 – 7.24	0.064
Hyperlipidemia	1.19	1.08 - 1.31	<0.001	1.25	1.09 - 1.44	0.002	1.22	1.11 – 1.35	<0.001
Previous by-pass surgery	1.85	1.09 - 3.14	0.023	1.11	0.51 – 2.41	0.795	1.91	1.05 – 3.46	0.033
Two or more treated vessels	1.21	1.10 - 1.33	<0.001	1.27	1.10 - 1.46	0.001	1.12	1.01 – 1.24	0.026
Drug eluting stents * Time (quarter)	0.96	0.94 - 0.97	<0.001	0.97	0.94 - 0.99	0.006	0.96	0.94 – 0.97	<0.001
Guidelines implementation	1.20	1.11 - 1.30	<0.001	1.10	0.96 - 1.26	0.161	1.23	1.14 – 1.34	<0.001
Recommendation at PCI hospital discharge (Ref. 1 month) * Time (quarter)*Guidelines implementation									
<12 months	0.90	0.79 - 1.04	0.144	1.03	0.82 - 1.28	0.806	0.89	0.78 – 1.03	0.118
≥12 months	0.86	0.79 - 0.94	<0.001	0.93	0.81 – 1.08	0.349	0.84	0.77 – 0.92	<0.001
unknown	0.88	0.81 - 0.97	0.007	0.97	0.84 – 1.12	0.678	0.86	0.78 – 0.94	0.001
Random Effects	Var.	95% CI		Var.	95% CI		Var.	95% CI	
Random - Intercept	0.46	0.22 – 1.53		0.26	0.12 – 0.88		0.40	0.19 – 1.32	
Random - Slopes									
Recommendation at PCI hospital discharge (Ref. 1 month)									
<12 months	0.37	0.17 – 1.23		0.15	0.07 – 0.49		0.64	0.31 – 2.15	
≥12 months	0.39	0.19 – 1.31		0.30	0.14 – 0.99		0.40	0.19 – 1.33	
unknown	1.97	0.93 – 6.58		0.66	0.31 – 2.18		2.09	0.99 – 6.97	
Drug eluting stent	0.10	0.05 – 0.33		0.17	0.08 – 0.57		0.08	0.04 – 0.26	
ICC	0.085			0.043			0.098		

Supplemental figure 1. Persistence with DAPT from discharge to 12 monhts by year of episode.

Supplemental figure 2. Antiplatelet agent taken at discharge by quarter of the index episode.

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Supplemental figure 3. DAPT duration recommended in each hospital by year of episode