

Diagnostic accuracy, treatment and prognosis of myocardial infarction: an 11-year follow-up of a community-based cohort of 0.5 million Chinese adults

Supplementary Materials

Members of the China Kadoorie Biobank collaborative group.....	3
Supplementary Methods.....	4
Supplementary References.....	7
Table S1: Study endpoints and associated ICD-10 codes.....	8
Table S2: Baseline characteristics of participants with reported incident IHD with accessible records by subtype.....	9
Table S3: Baseline characteristics of IHD cases by retrieval status of medical records.....	10
Table S4: Baseline characteristics of reported, verified, and adjudication-confirmed IHD cases.....	11
Table S5: Baseline characteristics of fatal reported incident IHD events by hospitalisation status.....	12
Table S6: Reporting and diagnostic accuracy of all reported IHD cases by selected characteristics.....	13
Table S7: Reporting and diagnostic accuracy of hospitalised MI cases by year of diagnosis.....	14
Table S8: Accuracy of reported and verified hospitalised IHD events by subtype at (a) verification and (b) adjudication.....	15
Table S9: Reporting and diagnostic accuracy of hospitalised IHD cases by area.....	16
Table S10: Hospital discharge diagnoses among unverified IHD cases by reported IHD subtype.....	17
Table S11: Non-circulatory disease diagnoses among unverified IHD cases.....	18
Table S12: Physician-adjudicated diagnoses among refuted IHD cases by discharge diagnosis.....	19
Table S13: Non-circulatory disease diagnoses among refuted IHD cases.....	20
Table S14: Reporting and diagnostic accuracy of all IHD cases reported by health insurance and disease registries including participants with prior IHD at baseline.....	21
Table S15: Performance of medical tests.....	22
Table S16: Use of standard medication, revascularisation and traditional Chinese medicine by IHD subtypes and sex.....	23
Table S17: Use of standard medication, revascularisation and traditional Chinese medicine by IHD subtypes and area.....	24
Table S18: Use of standard medication, revascularisation and traditional Chinese medicine by IHD subtypes and hospital tier.....	25
Table S19: Use of standard medication and revascularisation by IHD subtypes by reporting year and age at diagnosis.....	26
Table S20: Cumulative event rates of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days following first adjudicated event of different IHD subtypes.....	27
(a) after first MI.....	27
(b) after first non-MI.....	28
(c) after first IHD.....	29
Table S21: Cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first adjudicated event of different IHD subtypes (combining before and after 28 days).....	30
(a) after first MI.....	30
(b) after first non-MI.....	31
(c) after first IHD.....	32
Table S22: Cumulative event rates of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days following first reported event of different IHD subtypes.....	33
(a) after first MI.....	33
(b) after first non-MI.....	34
(c) after first IHD.....	35
Figure S1: Associations of SBP and BMI with risk of MI by adjudication status.....	36
Figure S2: Associations of SBP and BMI with risk of non-MI by adjudication status.....	37
Figure S3: Age-specific 28-day case-fatality rates after first adjudicated event of different IHD types by sex and area.....	38
Figure S4: Age-specific 28-day case-fatality rates after first adjudicated event of different IHD types by hospital tier.....	39
Figure S5: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days after first adjudicated event of different IHD types by sex.....	40
Figure S6: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days after first adjudicated event of different IHD types by area.....	41
Figure S7: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first adjudicated event of different IHD types by hospital tier.....	42

Figure S8: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first event of different IHD types by validation status	43
Figure S9: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days after first event of different IHD types	45
Figure S10: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first event of different IHD types (combining before and after 28 days)	46
Figure S11: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first adjudicated event of different IHD types (combining before and after 28 days)	47
Figure S12: Estimated cumulative event rate of stroke types from 28 days after first adjudicated event of different IHD types	48
Figure S13: Estimated cumulative event rate of ischaemic heart disease and other cardiovascular disease from 28 days after first adjudicated event of different IHD types	49

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Supplementary Methods

Retrieval and verification of reported IHD subtypes

Medical records of all reported first incident cases of ischaemic heart disease (IHD) were sought for verification and adjudication from accessible hospitals (functioning hospitals in the study areas but excluding military hospitals). Hospitals located outside the study regions, military hospitals or hospitals that had recently closed were considered inaccessible. Verification of reported IHD cases with retrieved records was conducted by trained local CKB staff using bespoke software (Portable Validation Device [PVD]) with a high-resolution camera for capturing medical records. Photographs were taken of the initial page, discharge summary (including discharge diagnosis), electrocardiogram (ECG) reports, results of troponin and cardiac enzyme assays, and coronary angiography records in addition to vital status at discharge.⁽¹⁾ Verified diagnoses of IHD without sufficient accompanying clinical information were considered to be secondary, i.e., additional health conditions that were not the main reason for admission, and these cases were not selected for adjudication. If a reported IHD diagnosis was not found in the medical records (“unverified case”), any other non-IHD diagnoses were recorded as free-text and later assigned International Classification of Diseases 10th revision (ICD-10) codes using bespoke disease standardisation software. Subsequently, these diagnoses were classified into cardiovascular disease (CVD)-related (non-IHD cardiac disease, cerebrovascular, and other circulatory diseases), non-CVD-related diseases, or other unclassified diseases (**Figure 1, Table S1**).

Adjudication of IHD subtypes

All first incident cases with verified primary IHD (i.e., where IHD was the main condition treated during admission), were adjudicated by one of 21 licensed cardiologists from 8 major Tier 3 hospitals who worked as Senior Registrars under the supervision of Consultants Cardiologists. Using a bespoke web-based platform (internet-based Case Adjudication System for clinical Events [*i*-CASE]), adjudicators were invited to review electronic copies of medical records and complete a standardised electronic form, which recorded details on clinical features and diagnostic criteria (including ECG, biomarkers of myocardial injury, and coronary angiography). Myocardial infarction (MI) was defined using World Health Organization (WHO) criteria as presence of any two or more of: (1) anginal chest pain; (2) ECG changes (pathological Q waves, ST-segment elevation or ST-segment depression, T-wave inversion, new left bundle branch block [LBBB]); and (3) elevated plasma levels of cardiac enzymes (CK-MB) or troponins. Use of guideline-directed treatments was also documented in the *i*-CASE form, including medications (antiplatelet, lipid-lowering, antihypertensive, and anticoagulant agents) and any revascularisation therapy, which encompassed any coronary intervention (percutaneous coronary intervention [PCI] or coronary artery bypass graft [CABG]) and thrombolysis. Using these data sources, the cardiologists adjudicated the reported diagnoses of IHD as MI or non-MI IHD subtypes (including non-MI acute IHD and chronic IHD), and any refuted cases of IHD were given a non-IHD diagnosis where possible. Diagnoses for refuted cases were subsequently assigned appropriate ICD-10 codes by study clinicians using bespoke standardisation software and classified as CVD-related (non-IHD cardiac disease, cerebrovascular, and other circulatory diseases), non-CVD diseases, or other unclassified diseases.

IHD validation status

- **Reported cases**
 - First incident IHD cases identified from routine data sources, namely electronic linkage (via unique national identifiers) with death and disease registers and the nationwide Health Insurance (HI) system, supplemented by active follow-up to capture events not recorded from these sources (including for participants who had moved out of study areas)
- **Verified cases**
 - Reported cases for which hospital medical records containing documentary evidence of IHD diagnosis were successfully retrieved by local CKB staff
 - Verification required photographic capture of discharge summaries (with discharge diagnosis) with or without ECG, troponin or cardiac enzyme results, angiography reports, and vital status at discharge
 - A case was classified as **unverified** if retrieved records did not contain an IHD diagnosis
- **Adjudication-confirmed cases**
 - Verified IHD cases independently reviewed by trained cardiologists to confirm diagnoses of MI or non-MI IHD subtypes
 - Adjudicators applied standardised diagnostic criteria (ECG, biomarkers of myocardial injury, angiography, clinical features, and treatments)
 - A case was classified as **refuted** by adjudicators if the provided clinical information did not support the verified diagnosis of MI or non-MI IHD subtypes

Quality control

Quality control procedures involved assessing both the accuracy and consistency of diagnoses. ⁽¹⁾ Consistency was evaluated by comparing adjudicated diagnoses for the same clinical event between two different adjudicators, either centrally or within routine processes using random subsets of cases (e.g., 10% of disease events). The alignment with international standard criteria was also checked by comparing adjudicated diagnoses to computer-generated diagnoses based on standard algorithms. Any substantial discrepancies between adjudicators or deviations from standard criteria were flagged for further investigation and additional central review by study clinicians with relevant training in cardiology.

Statistical analysis

Retrieval rates were defined as the proportions of cases with hospital records retrieved among the total number of reported accessible IHD cases (excluding reported deaths). Reporting accuracy (i.e., the proportion of retrieved reported cases with evidence of IHD found in hospital records during disease verification) and diagnostic accuracy of IHD (i.e., the proportion of all verified primary IHD cases that were confirmed during independent adjudication) were estimated using positive predictive values (PPV), for any IHD and MI. Only participants with incident diagnoses of IHD reported by health insurance (HI) or disease register were included in analyses of accuracy. All analyses were conducted using R (version 4.2.2).

Additional details on verification of diagnoses of IHD subtypes

Successful retrieval rates of medical records were higher in cases reported by HI than by disease registers (83.4% vs 75.4%), in those reported in later than in earlier years of follow-up (90.5% in 2015 vs 75.8% in 2004 – 2008), and in those reported from Tier 3 than Tier 2 or Tier 1 hospitals (91.5% vs 83.0% vs 72.4%; **Table S6**). In addition, retrieval was more successful in urban than rural areas (92.6% vs 70.8%; **Table S6**), with highest rates in Liuzhou (urban; 94.7%) and lowest rates in Gansu (rural; 53.6%) (**Table S9**). Reported IHD cases differed by retrieval status, with a higher proportion of MI cases where records were unretrieved than retrieved (10% vs 6%). Unretrieved cases were more frequent in rural than in urban areas (79% vs 43%) and in younger than older people at baseline (56.9 vs 58.9 years) (**Table S3**). While 49% of participants with reported IHD cases lived in rural areas, with 42% for verified cases and 37% for adjudication-confirmed cases, the baseline characteristics of these groups were otherwise similar (**Table S4**).

Overall, the PPVs were higher for diagnoses reported in urban than in rural areas (87.3% vs 83.2%; **Table S6**), with highest reporting accuracy in Qingdao (urban; 95.7%) and lowest in Zhejiang (rural; 69.7%), respectively (**Table S9**). The PPV for cases reported by HI were higher than those reported by disease registers (85.9% vs 84.0%), but rates were comparable by sex. The PPV for reported IHD cases increased by calendar years of follow-up (80.6% for 2008 vs 89.5% for 2015; **Table S6**). Among retrieved IHD cases verified from available records, 2,025 (7%) were MI, of which 962 (48%) were originally reported as MI while 1,063 (52%) were reclassified from non-MI IHD cases (**Table S8**).

Among 4,397 (14%) cases without a verified diagnosis of IHD in retrieved medical records, 202 (5%) had a reported diagnosis of MI IHD (**Table S10; Figure 1**). Among all unverified IHD cases, 936 (21%) had non-IHD cardiac diseases, of which 37 (4%) had heart failure and 113 (12%) had valvular heart disease. A total of 1,611 (37%) had cerebrovascular disease and 1,720 (39%) had non-circulatory disease, among which 163 (9%) cases had chronic obstructive pulmonary disease (ICD-10 J44) and 72 (4%) cases had gastritis and duodenitis (ICD-10 K29) (**Table S11**).

Additional details on adjudication of IHD subtypes

The PPV for adjudicated IHD was higher for cases from urban than from rural areas (94.3% vs 91.0%; **Table S6**), with highest and lowest diagnostic accuracy in Liuzhou (urban; 94.7%) and Zhejiang (rural; 84.6%), respectively (**Table S9**). Diagnostic accuracy was higher in those reported by HI than by disease registers (93.5% vs 91.1%), but was similar in Tier 3 and Tier 2 hospitals (93.4% vs 92.7%), and in men and women (93.6% vs 92.7%) (**Table S6**). In addition, PPV increased by year of reporting for adjudication-confirmed IHD (90.6% in 2008 vs 93.5% in 2015; **Table S6**) and MI (95.3% for 2008 vs 99.5% for 2015; **Table S7**).

Among all adjudication-confirmed diagnoses of IHD, 1,948 (10.2%) had MI, 81% (n=1,588) of which were initially verified as MI (**Table S8; Figure 1**). Of 1,426 (7%) refuted primary IHD cases, 25 (2%) had a discharge diagnosis of MI (**Table S12; Figure 1**). Overall, 448 (31%) had non-IHD cardiac diseases, of which 143 (32%) had atrial fibrillation and 149 (33%) had other arrhythmias (**Table S12**). A total of 209 (15%) refuted cases had a diagnosis of cerebrovascular disease and 721 (51%) had non-circulatory disease, among which most (568; 79%) had no codable diagnosis, 34 (5%) had abnormal findings on diagnostic imaging of central nervous system (ICD-10 R90), and 20 (3%) had other respiratory disorders (ICD-10 J98) (**Table S13**). In participants with self-reported IHD at baseline, the PPV for adjudicated IHD was slightly higher than in those with first incident IHD cases (94.2% vs 93.1%; $p=0.0057$; **Table S14**).

Supplementary References

1. Chen Y, Clarke R. Verification and Adjudication of Health Outcomes in Prospective Cohort Studies, in Population Biobank Studies: A Practical Guide. 2020: p. 123-143.

Table S1: Study endpoints and associated ICD-10 codes

Disease types	ICD-10 codes	Number of cases	
		At verification N (%)	At adjudication N (%)
Ischaemic heart disease (IHD)	I20 - I25	26,002 (86)	19,135 (93)
Myocardial infarction (MI)	I21 - I23, I25.2	2,422 (8)	2,436 (12)
Acute MI	I21	2,025 (7)	1,911 (9)
Subsequent MI	I22		37 (0)
Complications following MI	I23		
STEMI (ST elevation myocardial infarction)	I21.0 - I21.3, I22.0 - I22.8, I23		830 (4)
NSTEMI (Non-ST elevation myocardial infarction)	I21.4		468 (2)
Unspecified MI	I21.9, I22.9		650 (3)
Old MI	I25.2	397 (1)	488 (2)
Non-MI	I20, I24, I25, excluding I25.2	23,580 (78)	16,699 (81)
Non-MI acute IHD	I20, I24	8,714 (29)	10,748 (52)
Angina	I20	8,389 (28)	10,748 (52)
Other acute IHD	I24	325 (1)	
Chronic IHD	I25.0, I25.1, I25.3 - I25.9	14,866 (49)	5,951 (29)
Atherosclerotic heart disease	I25.0, I25.1	235 (1)	7 (0)
Aneurysm of heart	I25.3	1 (0)	
Coronary aneurysm and dissection	I25.4		
Ischaemic cardiomyopathy	I25.5	43 (0)	
Silent myocardial ischaemia	I25.6	3 (0)	7 (0)
Other chronic IHD	I25.8		
Unspecified chronic IHD	I25.9	52 (0)	5,936 (29)
Non-IHD cardiac disease	I00 - I09, I26 - I52	936 (3)	448 (2)
Heart failure	I50	37 (0)	74 (0)
Atrial fibrillation	I48	27 (0)	143 (1)
Other arrhythmia	I47, I49	221 (1)	149 (1)
Cardiomyopathy	I42 - I43	61 (0)	4 (0)
Valvular heart disease	I00 - I09, I34 - I39	113 (0)	15 (0)
Pulmonary heart disease and diseases of pulmonary circulation	I26 - I28	46 (0)	9 (0)
Cardiac arrest	I46	1 (0)	
Other non-IHD cardiac disease	I30 - I33, I40 - I41, I44 - I45, I51 - I52	430 (1)	54 (0)
Cerebrovascular disease	I60 - I69	1,611 (5)	209 (1)
Hypertensive disease	I10 - I15	93 (0)	45 (0)
Other circulatory disease	I70 - I79, I80 - I89, I95 - I99	37 (0)	3 (0)
Non-circulatory disease	All codes, excluding I00 - I99	1,720 (6)	721 (4)

ICD-10 = International Classification of Diseases 10th revision

Table S2: Baseline characteristics of participants with reported incident IHD with accessible records by subtype

Mean (SD) or n (%)	MI (N = 2,620)	Non-MI (N = 34,539)	Any IHD (N = 37,159)	All participants (N = 497,254)
Demographic factors				
Age at baseline, years	60.3 (9.8)	58.9 (9.9)	59.0 (9.9)	51.7 (10.6)
Age at first onset, years	66.2 (10.0)	65.1 (10.1)	65.1 (10.1)	62.2 (10.2)
Male	1,587 (65)	13,305 (39)	14,892 (41)	204,487 (41)
Rural resident	1,359 (57)	17,028 (51)	18,387 (51)	281,570 (57)
High school or higher education	530 (19)	8,029 (21)	8,559 (21)	103,175 (21)
Household income \geq 20,000 yuan/year	995 (42)	13,557 (43)	14,552 (43)	212,155 (43)
Lifestyle factors				
Current regular alcohol drinker				
Men	602 (39)	5,794 (44)	6,396 (43)	85,728 (42)
Women	32 (5)	858 (3)	890 (3)	8,621 (3)
Current regular smoker				
Men	1,016 (72)	7,560 (64)	8,576 (65)	125,955 (62)
Women	66 (5)	931 (3)	997 (3)	6,762 (2)
Total physical activity, MET-h/day	19.4 (12.4)	20.3 (11.6)	20.4 (11.6)	21.3 (13.9)
Medical history[*]				
Prior stroke/TIA	126 (3)	1,239 (2)	1,365 (2)	7,657 (2)
Prior and screen-detected diabetes	406 (14)	3,821 (8)	4,227 (9)	27,602 (6)
Medication use[†]				
Statin	7 (0.2)	127 (0.4)	134 (0.3)	930 (0.2)
Any antihypertensive agent	546 (15)	6,123 (15)	6,669 (15)	42,107 (8)
Aspirin	68 (2)	644 (1)	712 (1)	3,823 (1)
Anthropometry				
BMI, kg/m ²	24.1 (3.5)	24.3 (3.7)	24.3 (3.7)	23.6 (3.4)
SBP, mmHg	138.1 (24.1)	134.9 (23.2)	135.0 (23.3)	130.8 (21.2)
RHR, bpm	79.7 (12.2)	79.3 (12.1)	79.3 (12.1)	78.9 (11.8)
Length of hospital stay, days[‡]	9 (6-13)	8 (5-12)	8 (5-12)	–

Excluding participants with prior IHD.

Means and percentages are directly standardised to the age (at baseline, 5 year intervals), sex, and study region structure of the CKB cohort after excluding participants with prior IHD, as appropriate.

Non-MI includes non-MI acute IHD and chronic IHD cases.

^{*} Self-reported at baseline questionnaire

[†] Self-reported taking blood pressure medication and/or taking ACE inhibitors, beta-blockers, diuretics, or calcium channel blockers.

[‡] Median (IQR)

MI = myocardial infarction; IHD = ischaemic heart disease; TIA = transient ischaemic attack; BMI = body mass index; SBP = systolic blood pressure; RHR = heart rate; SD = standard deviation.

Table S3: Baseline characteristics of IHD cases by retrieval status of medical records

Mean (SD) or n (%)	Records accessible		Records retrieved	
	Yes (N = 37,159)	No (N = 6,482)	Yes (N = 30,399)	No (N = 6,760)
Reported IHD type**				
MI	2,620 (7)	392 (6)	1,939 (6)	681 (10)
Non-MI	34,539 (93)	6,090 (94)	28,460 (94)	6,079 (90)
Demographic factors				
Age at baseline, years	58.4 (9.9)	56.3 (9.9)	58.9 (9.8)	56.9 (10.4)
Age at first onset, years	64.5 (10.1)	66.0 (10.2)	65.2 (9.8)	62.0 (10.7)
Male	14,892 (40)	2,599 (41)	12,137 (40)	2,755 (39)
Rural resident	18,387 (50)	3,786 (59)	13,009 (43)	5,378 (79)
High school or higher education	8,559 (23)	1,339 (23)	7,695 (23)	864 (22)
Household income \geq 20,000 yuan/year	14,552 (40)	2,929 (40)	12,370 (40)	2,182 (39)
Lifestyle factors				
Current regular alcohol drinker				
Men	6,396 (43)	1,043 (42)	5,399 (43)	997 (43)
Women	890 (4)	113 (4)	744 (4)	146 (4)
Current regular smoker				
Men	8,576 (58)	1,577 (57)	6,847 (58)	1,729 (57)
Women	997 (4)	99 (4)	844 (4)	153 (5)
Total physical activity, MET-h/day	16.2 (11.6)	16.6 (13.3)	16.1 (11.0)	16.5 (13.4)
Medical history*				
Prior stroke/TIA	1,365 (4)	133 (2)	1,218 (4)	147 (3)
Prior and screen-detected diabetes	4,227 (11)	505 (9)	3,722 (11)	505 (10)
Medication use†				
Statin	134 (0.4)	22 (0.3)	114 (0.4)	20 (0.2)
Any antihypertensive agent	6,669 (18)	918 (15)	5,707 (18)	962 (16)
Aspirin	712 (2)	75 (1)	597 (2)	115 (2)
Anthropometry				
BMI, kg/m ²	24.3 (3.7)	24.2 (3.6)	24.4 (3.7)	24.2 (3.6)
SBP, mmHg	138.2 (23.3)	136.5 (22.7)	138.6 (23.3)	137.0 (23.3)
RHR, bpm	78.6 (12.1)	78.3 (12.1)	78.6 (12.1)	78.6 (12.4)
Length of hospital stay, days‡	8 (5-12)	7 (2-10)	9 (6-13)	6 (3-10)

Means and percentages are directly standardised to the age (at baseline, 5 year intervals), sex, and study region structure of IHD cases, as appropriate.

Non-MI includes non-MI acute IHD and chronic IHD cases.

* Self-reported at baseline questionnaire

** percentages not standardised

† Self-reported taking blood pressure medication and/or taking ACE inhibitors, beta-blockers, diuretics, or calcium channel blockers.

‡ Median (IQR)

TIA = transient ischaemic attack; BMI = body mass index; SBP = systolic blood pressure; RHR = heart rate; SD = standard deviation.

Table S4: Baseline characteristics of reported, verified, and adjudication-confirmed IHD cases

	Reported cases*	Verified cases	Adjudication-confirmed cases
Mean (SD) or n (%)	(N = 37,159)	(N = 26,002)	(N = 19,135)
Reported IHD type**			
MI	2,620 (7)	1,732 (7)	1,507 (8)
Non-MI	34,539 (93)	24,270 (93)	17,628 (92)
Demographic factors			
Age at baseline, years	58.4 (9.9)	59.0 (9.7)	58.8 (9.7)
Age at first onset, years	64.5 (10.1)	65.6 (9.6)	65.3 (9.6)
Male	14,892 (40)	10,332 (40)	7,760 (41)
Rural resident	18,387 (49)	10,820 (42)	7,004 (37)
High school or higher education	8,559 (23)	6,621 (23)	5,193 (23)
Household income \geq 20,000 yuan/year	14,552 (39)	10,574 (39)	8,140 (39)
Lifestyle factors			
Current regular alcohol drinker			
Men	6,396 (43)	4,586 (43)	3,374 (43)
Women	890 (4)	636 (4)	376 (4)
Current regular smoker			
Men	8,576 (58)	5,851 (58)	4,443 (59)
Women	997 (4)	738 (4)	465 (4)
Total physical activity, MET-h/day	15.8 (11.6)	15.7 (10.9)	15.7 (10.9)
Medical history**			
Prior stroke/TIA	1,365 (4)	1,014 (4)	727 (3)
Prior and screen-detected diabetes	4,227 (11)	3,255 (12)	2,435 (12)
Medication use†			
Statin	134 (0.4)	94 (0.4)	60 (0.4)
Any antihypertensive agent	6,669 (18)	4,910 (19)	3,579 (18)
Aspirin	712 (2)	520 (2)	400 (2)
Anthropometry			
BMI, kg/m ²	24.4 (3.7)	24.5 (3.6)	24.5 (3.6)
SBP, mmHg	138.3 (23.3)	138.8 (23.2)	138.9 (23.1)
RHR, bpm	78.6 (12.1)	78.5 (12.0)	78.4 (11.9)
Length of hospital stay, days‡	8 (5-12)	9 (6-13)	9 (6-13)

Excluding participants with prior IHD.

Non-MI includes non-MI acute IHD and chronic IHD cases.

Means and percentages are directly standardised to the age (at baseline, 5 year intervals), sex, and study region structure of the cases with accessible records, as appropriate.

* Reported IHD cases with accessible records

** Self-reported at baseline questionnaire

** percentages not standardised

† Self-reported taking blood pressure medication and/or taking ACE inhibitors, beta-blockers, diuretics, or calcium channel blockers.

‡ Median (IQR)

TIA = transient ischaemic attack; BMI = body mass index; SBP = systolic blood pressure; RHR = heart rate; SD = standard deviation.

Table S5: Baseline characteristics of fatal reported incident IHD events by hospitalisation status

Mean (SD) or n (%)	Death pre-hospital		Death 0 - 28 days		Death 28 days - 5 years	
	MI (n = 2,370)	Non-MI (n = 1,675)	MI (n = 689)	Non-MI (n = 129)	MI (n = 793)	Non-MI (n = 821)
Demographic factors						
Age at baseline, years	63.2 (9.9)	64.9 (8.9)	62.7 (9.4)	65.8 (6.9)	64.0 (8.6)	65.0 (7.8)
Age at death, years	69.7 (10.3)	71.5 (9.3)	69.4 (10.0)	73.1 (7.4)	71.6 (9.0)	72.8 (7.9)
Sex, male	1,347 (58)	940 (53)	377 (55)	61 (48)	415 (53)	415 (49)
Rural	1,706 (72)	775 (46)	525 (75)	51 (42)	552 (69)	408 (50)
High school or higher education	256 (13)	252 (11)	64 (11)	14 (10)	76 (10)	116 (13)
Household income ≥ 20,000 yuan/year	469 (24)	490 (23)	141 (26)	38 (30)	191 (26)	266 (29)
Lifestyle factors						
Current regular alcohol drinker						
Men	433 (38)	379 (39)	136 (40)	19 (33)	142 (34)	165 (40)
Women	31 (4)	33 (5)	14 (3)	3 (4)	10 (3)	20 (5)
Current smoker						
Men	827 (57)	529 (58)	215 (59)	34 (57)	269 (63)	231 (58)
Women	63 (8)	53 (6)	17 (4)	8 (11)	23 (7)	31 (8)
Total physical activity, MET-h/day	12.9 (11.5)	12.3 (9.6)	12.7 (11.9)	13.0 (11.8)	13.2 (11.5)	11.4 (9.3)
Medical history and health status*						
Prior stroke/TIA	119 (6)	128 (7)	48 (9)	7 (4)	46 (6)	65 (8)
Prior and screen-detected diabetes	265 (13)	291 (15)	123 (21)	32 (20)	148 (19)	173 (18)
Medication use†						
Statin	10 (0.4)	5 (0.3)	0 (0.0)	1 (1.3)	2 (0.2)	2 (0.3)
Any antihypertensive agent	435 (21)	337 (19)	143 (28)	32 (25)	180 (22)	192 (22)
Aspirin	65 (3)	39 (3)	19 (4)	3 (3)	22 (3)	18 (3)
Anthropometry						
BMI, kg/m ²	23.3 (3.8)	23.2 (4.0)	23.8 (3.7)	23.4 (4.4)	23.8 (4.0)	24.1 (4.1)
SBP, mmHg	145.8 (25.9)	146.0 (25.5)	148.3 (24.4)	147.7 (25.6)	148.0 (26.1)	147.6 (24.0)
RHR, bpm	80.5 (12.8)	79.6 (12.5)	80.5 (12.6)	77.3 (12.5)	80.0 (12.7)	79.6 (13.6)

Means and percentages are directly standardised to the age (at baseline, 5 year intervals), sex, and study region structure of all participants with fatal reported incident IHD, as appropriate.

* Self-reported at baseline questionnaire

† Self-reported taking blood pressure medication and/or taking ACE inhibitors, beta-blockers, diuretics, or calcium channel blockers.

MI = myocardial infarction; IHD = ischaemic heart disease; TIA = transient ischaemic attack; BMI = body mass index; SBP = systolic blood pressure; RHR = heart rate; SD = standard deviation.

Table S6: Reporting and diagnostic accuracy of all reported IHD cases by selected characteristics

Demographic & Reporting sources	No. of reported cases**	Retrieved cases		Verified cases		Adjudication-confirmed cases	
		No.	%	No.	Reporting accuracy (PPV, 95% CI)	No.	Diagnostic accuracy (PPV, 95% CI)
Age at diagnosis							
<60	12,324	9,353	75.9	7,680	82.1 (81.3, 82.9)	5,994	92.3 (91.7, 93.0)
60 - 69	12,502	10,410	83.3	9,016	86.6 (86.0, 87.3)	6,642	93.4 (92.8, 94.0)
70 - 79	10,703	9,189	85.9	8,025	87.3 (86.7, 88.0)	5,687	93.4 (92.7, 94.0)
80+	1,630	1,447	88.8	1,281	88.5 (86.9, 90.2)	812	93.8 (92.2, 95.4)
Sex							
Male	14,892	12,137	81.5	10,332	85.1 (84.5, 85.8)	7,760	93.6 (93.1, 94.1)
Female	22,267	18,262	82.0	15,670	85.8 (85.3, 86.3)	11,375	92.7 (92.3, 93.2)
Region							
Rural	18,387	13,009	70.8	10,820	83.2 (82.5, 83.8)	7,004	91.0 (90.4, 91.6)
Urban	18,772	17,390	92.6	15,182	87.3 (86.8, 87.8)	12,131	94.3 (93.9, 94.7)
Reporting source							
Disease registry	7,528	5,677	75.4	4,767	84.0 (83.0, 84.9)	3,214	91.1 (90.2, 92.1)
Health insurance	29,631	24,722	83.4	21,235	85.9 (85.5, 86.3)	15,921	93.5 (93.1, 93.8)
Year of diagnosis							
<2008	2,838	2,152	75.8	1,388	64.5 (62.5, 66.5)	945	89.6 (87.7, 91.4)
2008	2,656	1,920	72.3	1,548	80.6 (78.9, 82.4)	1,172	90.6 (89.0, 92.2)
2009	2,621	1,903	72.6	1,585	83.3 (81.6, 85.0)	1,216	91.5 (90.0, 93.0)
2010	2,757	2,064	74.9	1,793	86.9 (85.4, 88.3)	1,395	91.0 (89.6, 92.4)
2011	3,525	2,489	70.6	2,093	84.1 (82.7, 85.5)	1,642	93.0 (91.8, 94.2)
2012	3,788	3,038	80.2	2,555	84.1 (82.8, 85.4)	1,945	92.8 (91.7, 93.9)
2013	4,152	3,538	85.2	3,124	88.3 (87.2, 89.4)	2,417	94.6 (93.8, 95.5)
2014	4,638	4,057	87.5	3,692	91.0 (90.1, 91.9)	2,627	96.2 (95.4, 96.9)
2015	4,348	3,935	90.5	3,523	89.5 (88.6, 90.5)	2,703	93.5 (92.6, 94.4)
>2015	5,836	5,303	90.9	4,701	88.6 (87.8, 89.5)	3,073	92.8 (91.9, 93.6)
Hospital tier							
0 [†]	2,671	1,439	53.9	1,085	75.4 (73.2, 77.6)	583	92.5 (90.5, 94.6)
1	10,762	7,791	72.4	6,495	83.4 (82.5, 84.2)	3,998	92.6 (91.8, 93.4)
2	6,288	5,221	83.0	4,497	86.1 (85.2, 87.1)	3,505	92.7 (91.8, 93.5)
3	17,438	15,948	91.5	13,925	87.3 (86.8, 87.8)	11,049	93.4 (93.0, 93.8)
All	37,159	30,399	81.8	26,002	85.5 (85.1, 85.9)	19,135	93.1 (92.7, 93.4)

PPV = positive predictive value

* cases with secondary diagnosis of IHD excluded from diagnostic accuracy assessment

** reported IHD cases with accessible records

† includes hospitals of unclassified tier

Table S7: Reporting and diagnostic accuracy of hospitalised MI cases by year of diagnosis

	No. of reported cases [†]	Retrieved cases		Verified cases		Adjudication-confirmed cases		P-value **
		No.	%	No.	Reporting accuracy (PPV, 95% CI)	No.	Diagnostic accuracy (PPV, 95% CI)	
<2008	249	140	56.2	122	87.1 (81.6, 92.7)	109	99.1 (97.3, 100.9)	0.20
2008	236	176	74.6	160	90.9 (86.7, 95.2)	141	95.3 (91.9, 98.7)	
2009	209	142	67.9	128	90.1 (85.2, 95.0)	112	97.4 (94.5, 100.3)	
2010	215	144	67.0	127	88.2 (82.9, 93.5)	110	97.3 (94.4, 100.3)	
2011	219	147	67.1	127	86.4 (80.9, 91.9)	109	96.5 (93.1, 99.9)	
2012	236	181	76.7	159	87.8 (83.1, 92.6)	141	98.6 (96.7, 100.5)	
2013	330	263	79.7	242	92.0 (88.7, 95.3)	208	96.7 (94.4, 99.1)	
2014	291	230	79.0	208	90.4 (86.6, 94.2)	187	97.9 (95.9, 99.9)	
2015	285	228	80.0	210	92.1 (88.6, 95.6)	192	99.5 (98.5, 100.5)	
>2015	350	288	82.3	249	86.5 (82.5, 90.4)	198	98.0 (96.1, 99.9)	
All	2,620	1,939	74.0	1,732	89.3 (87.9, 90.7)	1,507	97.7 (96.9, 98.4)	

MI = myocardial infarction; PPV = positive predictive value

[†] cases with secondary diagnosis of IHD excluded from diagnostic accuracy assessment^{**} P-value for test of equal proportions[†] reported IHD cases with accessible records

Table S8: Accuracy of reported and verified hospitalised IHD events by subtype at (a) verification and (b) adjudication

	Reported cases, N (%)		(a) Unverified [†] / (b) Refuted ^{**}	Total
	MI	Non-MI	No. (%)	No.
(a) Verified types				
Reported type [†]				
MI	1,066 (55%)	666 (34%)	207 (11%)	1,939
Non-MI	1,356 (5%)	22,914 (81%)	4,190 (15%)	28,460
Any IHD	2,422 (8%)	23,580 (78%)	4,397 (14%)	30,399
(b) Adjudication-confirmed types				
Verified type [‡]				
MI	1,909 (84%)	348 (15%)	28 (1%)	2,285
Non-MI	527 (3%)	16,351 (89%)	1,398 (8%)	18,276
Any IHD	2,436 (12%)	16,699 (81%)	1,426 (7%)	20,561

IHD = ischaemic heart disease; MI = myocardial infarction; PPV = positive predictive value

Non-MI includes non-MI acute IHD and chronic IHD cases.

^{*} no evidence of IHD on review of medical records by public health staff

^{**} no clinical evidence of IHD on independent adjudication by expert clinicians

[†] reported IHD cases with accessible records

[‡] cases with secondary diagnosis of IHD excluded from diagnostic accuracy assessment

Table S9: Reporting and diagnostic accuracy of hospitalised IHD cases by area

	No. of reported cases [†]	Retrieved cases		Verified cases		Adjudication-confirmed cases		P-value **
		No.	%	No.	Reporting accuracy (PPV, 95% CI)	No.	Diagnostic accuracy (PPV, 95% CI)	
Urban	18,772	17,390	92.6	15,182	87.3 (86.8, 87.8)	12,131	94.3 (93.9, 94.7)	<0.0001
Qingdao	3,181	2,969	93.3	2,840	95.7 (94.9, 96.4)	2,412	94.5 (93.6, 95.4)	
Harbin	9,404	8,799	93.6	7,679	87.3 (86.6, 88.0)	6,131	94.4 (93.9, 95.0)	
Haikou	1,481	1,360	91.8	1,200	88.2 (86.5, 89.9)	937	94.2 (92.7, 95.6)	
Suzhou	1,086	834	76.8	628	75.3 (72.4, 78.2)	469	90.4 (87.8, 92.9)	
Liuzhou	3,620	3,428	94.7	2,835	82.7 (81.4, 84.0)	2,182	94.7 (93.8, 95.6)	
Rural	18,387	13,009	70.8	10,820	83.2 (82.5, 83.8)	7,004	91.0 (90.4, 91.6)	
Sichuan	3,618	2,861	79.1	2,402	84.0 (82.6, 85.3)	801	88.8 (86.7, 90.9)	
Gansu	2,645	1,419	53.6	1,114	78.5 (76.4, 80.6)	830	91.7 (89.9, 93.5)	
Henan	5,293	4,102	77.5	3,535	86.2 (85.1, 87.2)	2,749	91.2 (90.2, 92.2)	
Zhejiang	1,977	1,203	60.8	838	69.7 (67.1, 72.3)	573	84.6 (81.9, 87.4)	
Hunan	4,854	3,424	70.5	2,931	85.6 (84.4, 86.8)	2,051	93.3 (92.3, 94.4)	

IHD = ischaemic heart disease; PPV = positive predictive value

[†] cases with secondary diagnosis of IHD excluded from diagnostic accuracy assessment

** P-value for test of equal proportions

[†] reported IHD cases with accessible records

Table S10: Hospital discharge diagnoses among unverified IHD cases by reported IHD subtype

Hospital discharge diagnoses	Reported IHD type (N, %)		
	MI	Non-MI	All IHD
Non-IHD cardiac disease			
Heart failure	1 (0)	36 (1)	37 (1)
Atrial fibrillation	2 (1)	25 (1)	27 (1)
Other arrhythmia	9 (4)	212 (5)	221 (5)
Cardiomyopathy	3 (1)	58 (1)	61 (1)
Valvular heart disease	1 (0)	112 (3)	113 (3)
Pulmonary heart disease	1 (0)	45 (1)	46 (1)
Cardiac arrest	0 (0)	1 (0)	1 (0)
Other non-IHD cardiac disease	14 (7)	416 (10)	430 (10)
Cerebrovascular disease	102 (49)	1,509 (36)	1,611 (37)
Hypertensive disease	0 (0)	93 (2)	93 (2)
Other circulatory disease	1 (0)	36 (1)	37 (1)
Non-circulatory disease	73 (35)	1,647 (39)	1,720 (39)
Total	207 (100)	4,190 (100)	4,397 (100)

Hierarchy: Heart failure > Atrial fibrillation > Other arrhythmia > Cardiomyopathy > Valvular heart disease > Pulmonary heart disease > Cardiac arrest > Other non-IHD cardiac disease > Cerebrovascular disease > Hypertensive disease > Other circulatory disease > Non-circulatory disease
 IHD = ischaemic heart disease

Table S11: Non-circulatory disease diagnoses among unverified IHD cases

Diagnosis	Number of cases
J44: Other chronic obstructive pulmonary disease	163
N28: Other disorders of kidney and ureter, not elsewhere classified	76
K29: Gastritis and duodenitis	72
E13: Other specified diabetes mellitus	64
C34: Malignant neoplasm of bronchus and lung	59
G45: Transient cerebral ischaemic attacks and related syndromes	57
E11: Non-insulin-dependent diabetes mellitus	49
J18: Pneumonia, organism unspecified	44
J98: Other respiratory disorders	43
C16: Malignant neoplasm of stomach	36
C15: Malignant neoplasm of oesophagus	34
C18: Malignant neoplasm of colon	33
J20: Acute bronchitis	33
C22: Malignant neoplasm of liver and intrahepatic bile ducts	32
M51: Other intervertebral disc disorders	32
M47: Spondylosis	31
D25: Leiomyoma of uterus	29
K81: Cholecystitis	29
C50: Malignant neoplasm of breast	28
N64: Other disorders of breast	28
G98: Other disorders of nervous system, not elsewhere classified	26
F45: Somatoform disorders	24
Q24: Other congenital malformations of heart	23
C53: Malignant neoplasm of cervix uteri	21
J42: Unspecified chronic bronchitis	21
C20: Malignant neoplasm of rectum	19
N19: Unspecified kidney failure	19
R69: Unknown and unspecified causes of morbidity	19
A15: Respiratory tuberculosis, bacteriologically and histologically confirmed	18
N39: Other disorders of urinary system	18
A09: Other gastroenteritis and colitis of infectious and unspecified origin	17
J06: Acute upper respiratory infections of multiple and unspecified sites	17
K25: Gastric ulcer	17
K80: Cholelithiasis	17
E78: Disorders of lipoprotein metabolism and other lipidaemias	16
K64: No codable diagnosis	16
C76: Malignant neoplasm of other and ill-defined sites	14
K83: Other diseases of biliary tract	14
K92: Other diseases of digestive system	13
N18: Chronic kidney disease	13
B88: Other infestations	12
D48: Neoplasm of uncertain or unknown behaviour of other and unspecified sites	12
H26: Other cataract	12
K35: Acute appendicitis	12
J45: Asthma	11
K40: Inguinal hernia	11
J40: Bronchitis, not specified as acute or chronic	10

Only diagnoses with 10 or more cases are shown.

Table S12: Physician-adjudicated diagnoses among refuted IHD cases by discharge diagnosis

Physician-adjudicated diagnoses	IHD diagnosis at discharge (N, %)		
	MI	Non-MI	All IHD
Non-IHD cardiac disease			
Heart failure	1 (4)	73 (5)	74 (5)
Atrial fibrillation	0 (0)	143 (10)	143 (10)
Other arrhythmia	2 (7)	147 (11)	149 (10)
Cardiomyopathy	0 (0)	4 (0)	4 (0)
Valvular heart disease	1 (4)	14 (1)	15 (1)
Pulmonary heart disease	1 (4)	8 (1)	9 (1)
Cardiac arrest	0 (0)	0 (0)	0 (0)
Other non-IHD cardiac disease	1 (4)	53 (4)	54 (4)
Cerebrovascular disease	5 (18)	204 (15)	209 (15)
Hypertensive disease	1 (4)	44 (3)	45 (3)
Other circulatory disease	0 (0)	3 (0)	3 (0)
Non-circulatory disease	16 (57)	705 (50)	721 (51)
Total	28 (100)	1,398 (100)	1,426 (100)

Hierarchy: Heart failure > Atrial fibrillation > Other arrhythmia > Cardiomyopathy > Valvular heart disease > Pulmonary heart disease > Cardiac arrest > Other non-IHD cardiac disease > Cerebrovascular disease > Hypertensive disease > Other circulatory disease > Non-circulatory disease
 IHD = ischaemic heart disease

Table S13: Non-circulatory disease diagnoses among refuted IHD cases

Diagnosis	Number of cases
No ICD-10 codable diagnosis	568
R90: Abnormal findings on diagnostic imaging of central nervous system	34
J98: Other respiratory disorders	20
R69: Unknown and unspecified causes of morbidity	18
K29: Gastritis and duodenitis	17
J18: Pneumonia, organism unspecified	9
J42: Unspecified chronic bronchitis	6
J44: Other chronic obstructive pulmonary disease	6
J22: Unspecified acute lower respiratory infection	3
J45: Asthma	3
A09: Other gastroenteritis and colitis of infectious and unspecified origin	2
B02: Zoster [herpes zoster]	2
D64: Other anaemias	2
F45: Somatoform disorders	2
J04: Acute laryngitis and tracheitis	2
J20: Acute bronchitis	2
K25: Gastric ulcer	2
K74: Fibrosis and cirrhosis of liver	2
C16: Malignant neoplasm of stomach	1
C34: Malignant neoplasm of bronchus and lung	1
E03: Other hypothyroidism	1
E05: Thyrotoxicosis [hyperthyroidism]	1
E11: Non-insulin-dependent diabetes mellitus	1
E87: Other disorders of fluid, electrolyte and acid-base balance	1
F41: Other anxiety disorders	1
F48: Other neurotic disorders	1
G90: Disorders of autonomic nervous system	1
H81: Disorders of vestibular function	1
J40: Bronchitis, not specified as acute or chronic	1
J47: Bronchiectasis	1
J90: Pleural effusion, not elsewhere classified	1
K27: Peptic ulcer, site unspecified	1
K31: Other diseases of stomach and duodenum	1
K76: Other diseases of liver	1
K92: Other diseases of digestive system	1
L50: Urticaria	1
M47: Spondylosis	1
M75: Shoulder lesions	1
N20: Calculus of kidney and ureter	1
R09: Other symptoms and signs involving the circulatory and respiratory systems	1
R42: Dizziness and giddiness	1
T78: Adverse effects, not elsewhere classified	1

Table S14: Reporting and diagnostic accuracy of all IHD cases reported by health insurance and disease registries including participants with prior IHD at baseline

	No. of reported cases	Retrieved cases		Verified cases		Adjudication-confirmed cases		P-value**
		No.	%	No.	Reporting accuracy (PPV, 95% CI)	No.	Diagnostic accuracy (PPV, 95% CI)	
All IHD cases	43,475	36,082	83.0	31,268	86.7 (86.3, 87.0)	23,208	93.3 (92.9, 93.6)	
No self-reported IHD at baseline	37,159	30,399	81.8	26,002	85.5 (85.1, 85.9)	19,135	93.1 (92.7, 93.4)	0.0057
Self-reported IHD at baseline	6,310	5,677	90.0	5,261	92.7 (92.0, 93.4)	4,073	94.2 (93.5, 94.9)	

PPV = positive predictive value; IHD = ischaemic heart disease

* cases with secondary diagnosis of IHD excluded from diagnostic accuracy assessment

** P-value for test of equal proportions

Table S15: Performance of medical tests

	No. of adjudication-confirmed cases	Tests performed, n (%)	
		Cardiac biomarkers*	ECG
Reported IHD subtype			
MI	2,436	2,212 (90.8)	2,401 (98.6)
Non-MI	16,699	10,588 (63.4)	16,286 (97.5)
Sex			
Men	7,760	5,600 (72.2)	7,592 (97.8)
Women	11,375	7,200 (63.3)	11,095 (97.5)
Region			
Rural	7,004	4,130 (59.0)	6,797 (97.0)
Urban	12,131	8,670 (71.5)	11,890 (98.0)
Hospital tier			
0	583	361 (61.9)	564 (96.7)
1	3,998	1,561 (39.0)	3,855 (96.4)
2	3,505	2,283 (65.1)	3,441 (98.2)
3	11,049	8,595 (77.8)	10,827 (98.0)
Year			
<2008	945	500 (52.9)	921 (97.5)
2008	1,172	647 (55.2)	1,147 (97.9)
2009	1,216	687 (56.5)	1,179 (97.0)
2010	1,395	831 (59.6)	1,362 (97.6)
2011	1,642	1,052 (64.1)	1,604 (97.7)
2012	1,945	1,268 (65.2)	1,896 (97.5)
2013	2,417	1,703 (70.5)	2,349 (97.2)
2014	2,627	1,874 (71.3)	2,563 (97.6)
2015	2,703	1,949 (72.1)	2,643 (97.8)
>2015	3,073	2,289 (74.5)	3,023 (98.4)
All	19,135	12,800 (66.9)	18,687 (97.7)

IHD = ischaemic heart disease; MI = myocardial infarction; ECG = electrocardiogram

Non-MI includes non-MI acute IHD and chronic IHD cases.

* cardiac enzymes and/or troponin testing

Table S16: Use of standard medication, revascularisation and traditional Chinese medicine by IHD subtypes and sex

Medications, n (%)	MI		Non-MI [*]	
	Men (n=1,571)	Women (n=865)	Men (n=6,189)	Women (n=10,510)
Standard medication				
Antiplatelet ^{**}	1,370 (87.2)	694 (80.2)	4,316 (69.7)	6,406 (61.0)
Lipid-lowering [†]	1,246 (79.3)	637 (73.6)	3,736 (60.4)	5,667 (53.9)
Antihypertensive [‡]	1,166 (74.2)	642 (74.2)	3,961 (64.0)	6,168 (58.7)
Anticoagulant [§]	931 (59.3)	421 (48.7)	1,231 (19.9)	1,229 (11.7)
Any standard medication	1,460 (92.9)	777 (89.8)	5,231 (84.5)	8,366 (79.6)
Revascularisation				
Thrombolysis	55 (3.5)	26 (3.0)	10 (0.2)	12 (0.1)
Any coronary intervention	601 (38.3)	226 (26.1)	586 (9.5)	430 (4.1)
Any revascularisation [¶]	643 (40.9)	248 (28.7)	596 (9.6)	442 (4.2)
Traditional Chinese Medication	933 (59.4)	515 (59.5)	4,242 (68.5)	7,622 (72.5)

Abbreviations: IHD = ischaemic heart disease; MI = myocardial infarction

^{*} includes non-MI acute IHD and chronic IHD cases

^{**} aspirin, clopidogrel, or GP IIb/IIIa antagonist therapy

[†] statin and non-statin lipid-lowering therapy

[‡] angiotensin converting enzyme inhibitor, angiotensin receptor blocker, beta blocker, calcium antagonist, or diuretic therapy

[§] low molecular weight heparin or unfractionated heparin therapy

^{||} percutaneous coronary intervention (PCI) or coronary artery bypass graft (CABG)

[¶] some cases received both thrombolytic therapy and any procedure

MI = myocardial infarction; IHD = ischaemic heart disease

Combined treatments from first 24 hours after admission, during hospital stay, and at discharge.

Table S17: Use of standard medication, revascularisation and traditional Chinese medicine by IHD subtypes and area

Medications, n (%)	MI		Non-MI [†]	
	Rural (n=880)	Urban (n=1,556)	Rural (n=6,124)	Urban (n=10,575)
Standard medication				
Antiplatelet ^{**}	712 (80.9)	1,352 (86.9)	3,212 (52.4)	7,510 (71.0)
Lipid-lowering [†]	631 (71.7)	1,252 (80.5)	2,863 (46.8)	6,540 (61.8)
Antihypertensive [‡]	622 (70.7)	1,186 (76.2)	3,662 (59.8)	6,467 (61.2)
Anticoagulant [§]	488 (55.5)	864 (55.5)	806 (13.2)	1,654 (15.6)
Any standard medication	793 (90.1)	1,444 (92.8)	4,687 (76.5)	8,910 (84.3)
Revascularisation				
Thrombolysis	43 (4.9)	38 (2.4)	10 (0.2)	12 (0.1)
Any coronary intervention	143 (16.2)	684 (44.0)	160 (2.6)	856 (8.1)
Any revascularisation [¶]	182 (20.7)	709 (45.6)	170 (2.8)	868 (8.2)
Traditional Chinese Medication	578 (65.7)	870 (55.9)	4,564 (74.5)	7,300 (69.0)

Abbreviations: IHD = ischaemic heart disease; MI = myocardial infarction

[†] includes non-MI acute IHD and chronic IHD cases

^{**} aspirin, clopidogrel, or GP IIb/IIIa antagonist therapy

[†] statin and non-statin lipid-lowering therapy

[‡] angiotensin converting enzyme inhibitor, angiotensin receptor blocker, beta blocker, calcium antagonist, or diuretic therapy

[§] low molecular weight heparin or unfractionated heparin therapy

^{||} percutaneous coronary intervention (PCI) or coronary artery bypass graft (CABG)

[¶] some cases received both thrombolytic therapy and any procedure

MI = myocardial infarction; IHD = ischaemic heart disease

Combined treatments from first 24 hours after admission, during hospital stay, and at discharge.

Table S18: Use of standard medication, revascularisation and traditional Chinese medicine by IHD subtypes and hospital tier

Medications, n (%)	MI				Non-MI			
	Tier: 0 (n=48) ^{††}	1 (n=228)	2 (n=370)	3 (n=1,790)	Tier: 0 (n=535)	1 (n=3,770)	2 (n=3,135)	3 (n=9,259)
Standard medication								
Antiplatelet ^{**}	36 (75.0)	156 (68.4)	305 (82.4)	1,567 (87.5)	298 (55.7)	1,455 (38.6)	2,032 (64.8)	6,937 (74.9)
Lipid-lowering [†]	34 (70.8)	133 (58.3)	258 (69.7)	1,458 (81.5)	246 (46.0)	1,179 (31.3)	1,664 (53.1)	6,314 (68.2)
Antihypertensive [‡]	32 (66.7)	133 (58.3)	270 (73.0)	1,373 (76.7)	300 (56.1)	1,816 (48.2)	1,981 (63.2)	6,032 (65.1)
Anticoagulant [§]	19 (39.6)	110 (48.2)	185 (50.0)	1,038 (58.0)	43 (8.0)	334 (8.9)	427 (13.6)	1,656 (17.9)
Any standard medication	39 (81.2)	187 (82.0)	333 (90.0)	1,678 (93.7)	403 (75.3)	2,460 (65.3)	2,584 (82.4)	8,150 (88.0)
Revascularisation								
Thrombolysis	1 (2.1)	11 (4.8)	22 (5.9)	47 (2.6)	1 (0.2)	4 (0.1)	5 (0.2)	12 (0.1)
Any coronary intervention	10 (20.8)	12 (5.3)	71 (19.2)	734 (41.0)	28 (5.2)	22 (0.6)	92 (2.9)	874 (9.4)
Any revascularisation [¶]	11 (22.9)	23 (10.1)	91 (24.6)	766 (42.8)	29 (5.4)	26 (0.7)	97 (3.1)	886 (9.6)
Traditional Chinese Medication								
	29 (60.4)	161 (70.6)	218 (58.9)	1,040 (58.1)	376 (70.3)	2,866 (76.0)	2,350 (75.0)	6,272 (67.7)

Abbreviations: IHD = ischaemic heart disease; MI = myocardial infarction

* includes non-MI acute IHD and chronic IHD cases

** aspirin, clopidogrel, or GP IIb/IIIa antagonist therapy

† statin and non-statin lipid-lowering therapy

‡ angiotensin converting enzyme inhibitor, angiotensin receptor blocker, beta blocker, calcium antagonist, or diuretic therapy

§ low molecular weight heparin or unfractionated heparin therapy

|| percutaneous coronary intervention (PCI) or coronary artery bypass graft (CABG)

¶ some cases received both thrombolytic therapy and any procedure

†† includes hospitals of unclassified tier

MI = myocardial infarction; IHD = ischaemic heart disease

Combined treatments from first 24 hours after admission, during hospital stay, and at discharge.

Table S19: Use of standard medication and revascularisation by IHD subtypes by reporting year and age at diagnosis

	No. (%) with any standard medication		No. (%) with any revascularisation	
	MI	Non-MI	MI	Non-MI
Year				
<2008	133 (91.7)	646 (80.8)	49 (33.8)	52 (6.5)
2008	149 (83.2)	817 (82.3)	56 (31.3)	86 (8.7)
2009	156 (83.4)	828 (80.5)	73 (39.0)	80 (7.8)
2010	163 (91.6)	995 (81.8)	76 (42.7)	90 (7.4)
2011	181 (90.0)	1,231 (85.4)	86 (42.8)	98 (6.8)
2012	238 (95.6)	1,410 (83.1)	83 (33.3)	91 (5.4)
2013	292 (91.0)	1,743 (83.2)	106 (33.0)	119 (5.7)
2014	318 (95.2)	1,877 (81.9)	128 (38.3)	104 (4.5)
2015	299 (94.6)	1,914 (80.2)	108 (34.2)	142 (5.9)
>2015	308 (94.5)	2,136 (77.8)	126 (38.7)	176 (6.4)
Age at diagnosis, years				
30 - 39	7 (100.0)	8 (47.1)	4 (57.1)	3 (17.6)
40 - 49	139 (93.9)	709 (68.6)	71 (48.0)	50 (4.8)
50 - 59	451 (90.4)	3,234 (77.9)	227 (45.5)	229 (5.5)
60 - 69	754 (92.2)	4,795 (83.4)	314 (38.4)	412 (7.2)
70 - 79	749 (91.3)	4,225 (84.3)	247 (30.1)	307 (6.1)
80 - 89	137 (95.1)	626 (84.9)	28 (19.4)	37 (5.0)
Total	2,237 (91.8)	13,597 (81.4)	891 (36.6)	1,038 (6.2)

Any standard medication includes antiplatelet, lipid-lowering, antihypertensive, and anticoagulant agents.

Any revascularisation includes thrombolysis, percutaneous coronary intervention (PCI) or coronary artery bypass graft (CABG).

Following MI, rates of any revascularisation in tier 3 hospitals by year were 40.4% (<2008), 39.8%, 45.4%, 43.9%, 45.3%, 37.6%, 42.1%, 46.8%, 41.1%, and 43.6% (>2015).

Table S20: Cumulative event rates of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days following first adjudicated event of different IHD subtypes**(a) after first MI**

	Years since first MI (n = 2,481)										
	28 days	1	2	3	4	5	6	7	8	9	10
Recurrent MI event											
No. events	0	132	177	211	232	263	281	293	298	299	304
No. free of any events and death	2,158	1,922	1,555	1,261	970	681	474	317	210	115	45
No. deaths	0	101	163	200	240	268	290	301	312	316	318
No. censored	0	3	263	486	716	946	1,113	1,247	1,338	1,428	1,491
Cumulative event rate, % (95% CI)	0	6 (5-7)	8 (7-10)	10 (9-12)	12 (10-13)	14 (13-16)	17 (15-19)	19 (16-21)	20 (17-22)	20 (18-23)	24 (20-28)
Stroke											
No. events	0	92	164	216	255	285	305	326	338	342	344
No. free of any events and death	2,165	1,931	1,534	1,210	919	635	440	288	188	102	40
No. deaths	0	139	209	254	289	324	347	361	372	376	380
No. censored	0	3	258	485	702	921	1,073	1,190	1,267	1,345	1,401
Cumulative event rate, % (95% CI)	0	4 (3-5)	8 (7-9)	11 (10-12)	14 (12-15)	16 (14-18)	19 (17-21)	22 (20-24)	25 (22-27)	26 (23-29)	27 (24-31)
Heart failure											
No. events	0	26	42	59	73	79	85	93	99	101	102
No. free of any events and death	2,196	2,020	1,659	1,342	1,034	737	526	357	237	137	54
No. deaths	0	147	227	278	325	365	390	411	425	430	435
No. censored	0	3	268	517	764	1,015	1,195	1,335	1,435	1,528	1,605
Cumulative event rate, % (95% CI)	0	1 (1-2)	2 (1-3)	3 (2-4)	4 (3-5)	4 (4-5)	5 (4-6)	6 (5-8)	8 (6-10)	8 (7-10)	9 (7-12)
All-cause mortality											
No. events	0	164	253	315	369	417	450	475	495	501	506
No. free of any events and death	2,220	2,053	1,687	1,373	1,066	755	538	371	248	140	57
No. censored	0	3	280	532	785	1,048	1,232	1,374	1,477	1,579	1,657
Cumulative event rate, % (95% CI)	0	7 (6-9)	12 (10-13)	15 (14-17)	19 (17-21)	23 (21-25)	27 (25-29)	31 (28-33)	35 (32-38)	37 (34-41)	40 (36-44)

IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases.

(b) after first non-MI

	Years since first non-MI (n = 16,778)										
	28 days	1	2	3	4	5	6	7	8	9	10
Recurrent MI event											
No. events	0	224	371	478	551	611	657	690	712	731	737
No. free of any events and death	16,591	15,844	12,610	10,181	7,768	5,543	3,817	2,563	1,644	916	353
No. deaths	0	493	816	1,061	1,265	1,417	1,530	1,610	1,670	1,701	1,719
No. censored	0	30	2,794	4,871	7,007	9,020	10,587	11,728	12,565	13,243	13,782
Cumulative event rate, % (95% CI)	0	1 (1-2)	2 (2-3)	3 (3-3)	4 (4-4)	5 (4-5)	6 (5-6)	6 (6-7)	7 (7-8)	8 (7-9)	9 (8-10)
Stroke											
No. events	0	793	1,467	1,991	2,352	2,614	2,784	2,870	2,957	2,998	3,023
No. free of any events and death	16,032	14,735	11,283	8,743	6,401	4,389	2,946	1,972	1,212	674	259
No. deaths	0	475	745	940	1,086	1,199	1,280	1,320	1,359	1,387	1,401
No. censored	0	29	2,537	4,358	6,193	7,830	9,022	9,870	10,504	10,973	11,349
Cumulative event rate, % (95% CI)	0	5 (5-5)	10 (9-10)	14 (13-14)	18 (17-18)	21 (20-22)	24 (23-25)	26 (25-27)	30 (29-31)	32 (31-33)	35 (33-37)
Heart failure											
No. events	0	129	247	328	391	441	467	493	507	515	516
No. free of any events and death	16,502	15,780	12,596	10,174	7,793	5,551	3,846	2,591	1,667	942	367
No. deaths	0	564	918	1,197	1,406	1,581	1,706	1,793	1,863	1,902	1,921
No. censored	0	29	2,741	4,803	6,912	8,929	10,483	11,625	12,465	13,143	13,698
Cumulative event rate, % (95% CI)	0	1 (1-1)	2 (1-2)	2 (2-2)	3 (3-3)	3 (3-4)	4 (4-4)	5 (4-5)	5 (5-6)	6 (5-6)	6 (5-6)
All-cause mortality											
No. events	0	613	1,017	1,337	1,584	1,785	1,933	2,032	2,111	2,158	2,182
No. free of any events and death	16,651	16,008	12,810	10,383	7,969	5,702	3,950	2,665	1,715	969	374
No. censored	0	30	2,824	4,931	7,098	9,164	10,768	11,954	12,825	13,524	14,095
Cumulative event rate, % (95% CI)	0	4 (3-4)	6 (6-7)	9 (8-9)	11 (11-12)	14 (13-15)	17 (16-17)	19 (18-20)	22 (21-23)	25 (23-26)	27 (26-29)

IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases.

(c) after first IHD

	Years since first IHD (n = 19,259)										
	28 days	1	2	3	4	5	6	7	8	9	10
Recurrent MI event											
No. events	0	356	548	689	783	874	938	983	1,010	1,030	1,041
No. free of any events and death	18,749	17,766	14,165	11,442	8,738	6,224	4,291	2,880	1,854	1,031	398
No. deaths	0	594	979	1,261	1,505	1,685	1,820	1,911	1,982	2,017	2,037
No. censored	0	33	3,057	5,357	7,723	9,966	11,700	12,975	13,903	14,671	15,273
Cumulative event rate, % (95% CI)	0	2 (2-2)	3 (3-3)	4 (4-4)	5 (4-5)	6 (5-6)	7 (6-7)	8 (7-8)	9 (8-9)	10 (9-10)	11 (10-12)
Stroke											
No. events	0	885	1,631	2,207	2,607	2,899	3,089	3,196	3,295	3,340	3,367
No. free of any events and death	18,197	16,666	12,817	9,953	7,320	5,024	3,386	2,260	1,400	776	299
No. deaths	0	614	954	1,194	1,375	1,523	1,627	1,681	1,731	1,763	1,781
No. censored	0	32	2,795	4,843	6,895	8,751	10,095	11,060	11,771	12,318	12,750
Cumulative event rate, % (95% CI)	0	5 (5-5)	9 (9-10)	14 (13-14)	17 (16-18)	20 (20-21)	23 (23-24)	26 (25-27)	29 (28-30)	31 (30-32)	34 (32-35)
Heart failure											
No. events	0	155	289	387	464	520	552	586	606	616	618
No. free of any events and death	18,698	17,800	14,255	11,516	8,827	6,288	4,372	2,948	1,904	1,079	421
No. deaths	0	711	1,145	1,475	1,731	1,946	2,096	2,204	2,288	2,332	2,356
No. censored	0	32	3,009	5,320	7,676	9,944	11,678	12,960	13,900	14,671	15,303
Cumulative event rate, % (95% CI)	0	1 (1-1)	2 (1-2)	2 (2-3)	3 (3-3)	4 (3-4)	4 (4-4)	5 (4-5)	5 (5-6)	6 (5-7)	6 (6-7)
All-cause mortality											
No. events	0	777	1,270	1,652	1,953	2,202	2,383	2,507	2,606	2,659	2,688
No. free of any events and death	18,871	18,061	14,497	11,756	9,035	6,457	4,488	3,036	1,963	1,109	431
No. censored	0	33	3,104	5,463	7,883	10,212	12,000	13,328	14,302	15,103	15,752
Cumulative event rate, % (95% CI)	0	4 (4-4)	7 (7-7)	10 (9-10)	12 (12-13)	15 (14-16)	18 (17-19)	20 (20-21)	24 (23-25)	26 (25-27)	29 (27-30)

IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases.

Table S21: Cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first adjudicated event of different IHD subtypes (combining before and after 28 days)**(a) after first MI**

	Years since first MI (n = 2,481)										
	28 days	1	2	3	4	5	6	7	8	9	10
Recurrent MI event											
No. events	209	341	386	420	441	472	490	502	507	508	513
No. free of any events and death	2,158	1,922	1,555	1,261	970	681	474	317	210	115	45
No. deaths	113	214	276	313	353	381	403	414	425	429	431
No. censored	1	4	264	487	717	947	1,114	1,248	1,339	1,429	1,492
Cumulative event rate, % (95% CI)	8 (7-10)	14 (12-15)	16 (14-17)	17 (16-19)	19 (17-20)	21 (19-23)	23 (21-25)	25 (23-27)	26 (23-28)	26 (24-28)	29 (26-33)
Stroke											
No. events	84	176	248	300	339	369	389	410	422	426	428
No. free of any events and death	2,165	1,931	1,534	1,210	919	635	440	288	188	102	40
No. deaths	232	371	441	486	521	556	579	593	604	608	612
No. censored	0	3	258	485	702	921	1,073	1,190	1,267	1,345	1,401
Cumulative event rate, % (95% CI)	3 (3-4)	7 (6-8)	10 (9-11)	13 (12-14)	15 (14-17)	18 (16-19)	20 (18-22)	23 (20-25)	25 (22-27)	26 (23-29)	27 (24-30)
Heart failure											
No. events	37	63	79	96	110	116	122	130	136	138	139
No. free of any events and death	2,196	2,020	1,659	1,342	1,034	737	526	357	237	137	54
No. deaths	247	394	474	525	572	612	637	658	672	677	682
No. censored	1	4	269	518	765	1,016	1,196	1,336	1,436	1,529	1,606
Cumulative event rate, % (95% CI)	1 (1-2)	3 (2-3)	3 (3-4)	4 (3-5)	5 (4-6)	5 (4-6)	6 (5-7)	7 (6-9)	8 (7-10)	9 (7-11)	10 (8-12)
All-cause mortality											
No. events	260	424	513	575	629	677	710	735	755	761	766
No. free of any events and death	2,220	2,053	1,687	1,373	1,066	755	538	371	248	140	57
No. censored	1	4	281	533	786	1,049	1,233	1,375	1,478	1,580	1,658
Cumulative event rate, % (95% CI)	10 (9-12)	17 (16-19)	21 (19-23)	24 (22-26)	27 (26-29)	31 (29-33)	34 (32-37)	38 (35-40)	42 (39-45)	44 (41-47)	46 (43-50)

IHD = ischaemic heart disease; MI = myocardial infarction

Non-MI includes non-MI acute IHD and chronic IHD cases.

(b) after first non-MI

	Years since first non-MI (n = 16,778)										
	28 days	1	2	3	4	5	6	7	8	9	10
Recurrent MI event											
No. events	92	316	463	570	643	703	749	782	804	823	829
No. free of any events and death	16,591	15,844	12,610	10,181	7,768	5,543	3,817	2,563	1,644	916	353
No. deaths	94	587	910	1,155	1,359	1,511	1,624	1,704	1,764	1,795	1,813
No. censored	1	31	2,795	4,872	7,008	9,021	10,588	11,729	12,566	13,244	13,783
Cumulative event rate, % (95% CI)	1 (0-1)	2 (2-2)	3 (3-3)	4 (3-4)	4 (4-5)	5 (5-6)	6 (6-6)	7 (6-7)	8 (7-8)	9 (8-9)	9 (8-10)
Stroke											
No. events	642	1,435	2,109	2,633	2,994	3,256	3,426	3,512	3,599	3,640	3,665
No. free of any events and death	16,032	14,735	11,283	8,743	6,401	4,389	2,946	1,972	1,212	674	259
No. deaths	103	578	848	1,043	1,189	1,302	1,383	1,423	1,462	1,490	1,504
No. censored	1	30	2,538	4,359	6,194	7,831	9,023	9,871	10,505	10,974	11,350
Cumulative event rate, % (95% CI)	4 (4-4)	9 (8-9)	13 (12-13)	17 (16-18)	21 (20-21)	24 (23-25)	27 (26-28)	29 (28-30)	32 (31-33)	34 (33-36)	37 (36-39)
Heart failure											
No. events	161	290	408	489	552	602	628	654	668	676	677
No. free of any events and death	16,502	15,780	12,596	10,174	7,793	5,551	3,846	2,591	1,667	942	367
No. deaths	114	678	1,032	1,311	1,520	1,695	1,820	1,907	1,977	2,016	2,035
No. censored	1	30	2,742	4,804	6,913	8,930	10,484	11,626	12,466	13,144	13,699
Cumulative event rate, % (95% CI)	1 (1-1)	2 (2-2)	2 (2-3)	3 (3-3)	4 (3-4)	4 (4-5)	5 (4-5)	5 (5-6)	6 (5-7)	6 (6-7)	7 (6-7)
All-cause mortality											
No. events	126	739	1,143	1,463	1,710	1,911	2,059	2,158	2,237	2,284	2,308
No. free of any events and death	16,651	16,008	12,810	10,383	7,969	5,702	3,950	2,665	1,715	969	374
No. censored	1	31	2,825	4,932	7,099	9,165	10,769	11,955	12,826	13,525	14,096
Cumulative event rate, % (95% CI)	1 (1-1)	4 (4-5)	7 (7-7)	10 (9-10)	12 (11-13)	15 (14-15)	17 (16-18)	20 (19-20)	22 (21-24)	25 (24-26)	28 (26-29)

IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases.

(c) after first IHD

	Years since first IHD (n = 19,259)										
	28 days	1	2	3	4	5	6	7	8	9	10
Recurrent MI event											
No. events	301	657	849	990	1,084	1,175	1,239	1,284	1,311	1,331	1,342
No. free of any events and death	18,749	17,766	14,165	11,442	8,738	6,224	4,291	2,880	1,854	1,031	398
No. deaths	207	801	1,186	1,468	1,712	1,892	2,027	2,118	2,189	2,224	2,244
No. censored	2	35	3,059	5,359	7,725	9,968	11,702	12,977	13,905	14,673	15,275
Cumulative event rate, % (95% CI)	2 (1-2)	3 (3-4)	4 (4-5)	5 (5-6)	6 (6-7)	7 (7-8)	8 (8-9)	9 (9-10)	10 (9-11)	11 (10-12)	12 (11-13)
Stroke											
No. events	726	1,611	2,357	2,933	3,333	3,625	3,815	3,922	4,021	4,066	4,093
No. free of any events and death	18,197	16,666	12,817	9,953	7,320	5,024	3,386	2,260	1,400	776	299
No. deaths	335	949	1,289	1,529	1,710	1,858	1,962	2,016	2,066	2,098	2,116
No. censored	1	33	2,796	4,844	6,896	8,752	10,096	11,061	11,772	12,319	12,751
Cumulative event rate, % (95% CI)	4 (4-4)	8 (8-9)	13 (12-13)	17 (16-17)	20 (19-21)	23 (22-24)	26 (25-27)	28 (27-29)	31 (30-32)	33 (32-34)	36 (34-37)
Heart failure											
No. events	198	353	487	585	662	718	750	784	804	814	816
No. free of any events and death	18,698	17,800	14,255	11,516	8,827	6,288	4,372	2,948	1,904	1,079	421
No. deaths	361	1,072	1,506	1,836	2,092	2,307	2,457	2,565	2,649	2,693	2,717
No. censored	2	34	3,011	5,322	7,678	9,946	11,680	12,962	13,902	14,673	15,305
Cumulative event rate, % (95% CI)	1 (1-1)	2 (2-2)	3 (2-3)	3 (3-4)	4 (4-4)	5 (4-5)	5 (5-5)	6 (5-6)	6 (6-7)	7 (6-7)	7 (6-8)
All-cause mortality											
No. events	386	1,163	1,656	2,038	2,339	2,588	2,769	2,893	2,992	3,045	3,074
No. free of any events and death	18,871	18,061	14,497	11,756	9,035	6,457	4,488	3,036	1,963	1,109	431
No. censored	2	35	3,106	5,465	7,885	10,214	12,002	13,330	14,304	15,105	15,754
Cumulative event rate, % (95% CI)	2 (2-2)	6 (6-6)	9 (8-9)	11 (11-12)	14 (13-15)	17 (16-17)	19 (19-20)	22 (21-23)	25 (24-26)	28 (26-29)	30 (29-32)

IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases.

Table S22: Cumulative event rates of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days following first reported event of different IHD subtypes**(a) after first MI**

	Years since first MI (n = 5,410)										
	28 days	1	2	3	4	5	6	7	8	9	10
Recurrent MI event											
No. events	0	186	248	296	320	343	361	370	375	382	388
No. free of any events and death	2,253	1,771	1,465	1,218	992	758	578	441	326	192	84
No. deaths	0	81	124	165	186	211	229	244	257	269	270
No. censored	0	215	416	574	755	941	1,085	1,198	1,295	1,410	1,511
Cumulative event rate, % (95% CI)	0	9 (7-10)	12 (10-13)	15 (13-16)	16 (15-18)	18 (16-20)	20 (18-22)	21 (19-23)	22 (20-24)	23 (21-26)	26 (23-29)
Stroke											
No. events	0	99	176	233	288	319	345	361	380	389	396
No. free of any events and death	2,306	1,846	1,502	1,226	982	739	566	423	297	172	71
No. deaths	0	147	207	254	279	308	328	344	355	369	371
No. censored	0	214	421	593	757	940	1,067	1,178	1,274	1,376	1,468
Cumulative event rate, % (95% CI)	0	4 (4-5)	8 (7-10)	12 (10-13)	15 (14-17)	18 (16-20)	20 (18-22)	22 (20-24)	25 (23-28)	27 (24-30)	30 (27-33)
Heart failure											
No. events	0	32	49	61	71	80	85	88	95	99	102
No. free of any events and death	2,351	1,935	1,638	1,378	1,142	882	698	537	391	239	103
No. deaths	0	158	222	288	316	350	375	398	418	434	438
No. censored	0	226	442	624	822	1,039	1,193	1,328	1,447	1,579	1,708
Cumulative event rate, % (95% CI)	0	1 (1-2)	2 (2-3)	3 (2-4)	4 (3-5)	4 (3-5)	5 (4-6)	5 (4-6)	6 (5-8)	7 (6-9)	8 (6-10)
All-cause mortality											
No. events	0	176	250	320	357	399	429	454	477	495	499
No. free of any events and death	2,387	1,979	1,675	1,420	1,176	912	722	559	415	253	112
No. censored	0	232	462	647	854	1,076	1,236	1,374	1,495	1,639	1,776
Cumulative event rate, % (95% CI)	0	8 (7-9)	11 (10-13)	15 (14-17)	18 (16-19)	21 (19-23)	24 (22-26)	27 (24-29)	30 (27-33)	34 (31-37)	35 (32-38)

IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases.

(b) after first non-MI

	Years since first non-MI (n = 42,282)										
	28 days	1	2	3	4	5	6	7	8	9	10
Recurrent MI event											
No. events	0	384	667	885	1,038	1,173	1,277	1,355	1,406	1,452	1,471
No. free of any events and death	39,791	34,336	28,185	23,750	19,346	15,585	12,040	8,725	6,511	4,265	2,168
No. deaths	0	1,129	1,873	2,458	2,982	3,415	3,771	3,999	4,195	4,344	4,409
No. censored	0	3,942	9,066	12,698	16,425	19,618	22,703	25,712	27,679	29,730	31,743
Cumulative event rate, % (95% CI)	0	1 (1-1)	2 (2-2)	3 (2-3)	3 (3-3)	4 (4-4)	5 (4-5)	5 (5-5)	6 (5-6)	6 (6-7)	7 (6-7)
Stroke											
No. events	0	1,673	3,025	4,060	4,784	5,372	5,814	6,103	6,325	6,460	6,551
No. free of any events and death	38,367	32,021	25,446	20,811	16,514	12,992	9,860	6,996	5,167	3,314	1,634
No. deaths	0	1,039	1,679	2,153	2,540	2,859	3,105	3,246	3,365	3,467	3,510
No. censored	0	3,634	8,217	11,343	14,529	17,144	19,588	22,022	23,510	25,126	26,672
Cumulative event rate, % (95% CI)	0	5 (4-5)	9 (8-9)	13 (12-13)	16 (15-16)	19 (18-19)	21 (21-22)	24 (23-24)	26 (25-26)	28 (27-28)	30 (29-31)
Heart failure											
No. events	0	436	662	859	1,014	1,121	1,207	1,272	1,337	1,372	1,399
No. free of any events and death	39,491	33,944	27,925	23,500	19,165	15,463	11,950	8,655	6,434	4,221	2,138
No. deaths	0	1,185	2,003	2,638	3,179	3,637	4,013	4,257	4,457	4,603	4,663
No. censored	0	3,926	8,901	12,494	16,133	19,270	22,321	25,307	27,263	29,295	31,291
Cumulative event rate, % (95% CI)	0	1 (1-1)	2 (2-2)	3 (2-3)	3 (3-3)	4 (3-4)	4 (4-4)	5 (4-5)	5 (5-6)	6 (6-6)	6 (6-7)
All-cause mortality											
No. events	0	1,330	2,251	2,980	3,610	4,149	4,588	4,875	5,113	5,296	5,382
No. free of any events and death	39,948	34,645	28,546	24,128	19,718	15,914	12,331	8,960	6,693	4,396	2,224
No. censored	0	3,973	9,151	12,840	16,620	19,885	23,029	26,113	28,142	30,256	32,342
Cumulative event rate, % (95% CI)	0	3 (3-4)	6 (6-6)	9 (8-9)	11 (11-12)	14 (14-14)	17 (16-17)	19 (18-19)	21 (21-22)	24 (23-25)	26 (25-27)

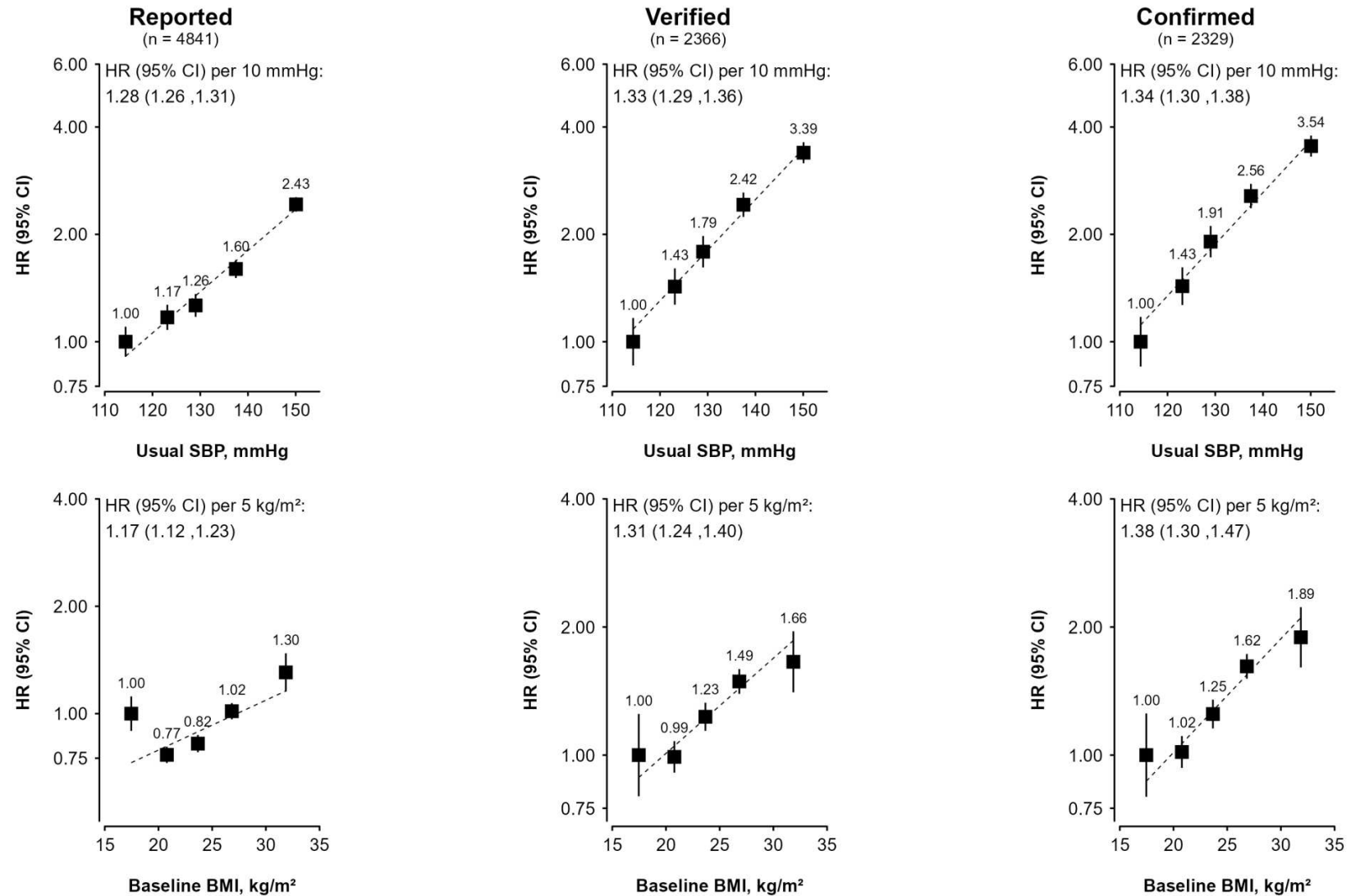
IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases.

(c) after first IHD

	Years since first IHD (n = 47,692)										
	28 days	1	2	3	4	5	6	7	8	9	10
Recurrent MI event											
No. events	0	570	915	1,181	1,358	1,516	1,638	1,725	1,781	1,834	1,859
No. free of any events and death	42,044	36,107	29,650	24,968	20,338	16,343	12,618	9,166	6,837	4,457	2,252
No. deaths	0	1,210	1,997	2,623	3,168	3,626	4,000	4,243	4,452	4,613	4,679
No. censored	0	4,157	9,482	13,272	17,180	20,559	23,788	26,910	28,974	31,140	33,254
Cumulative event rate, % (95% CI)	0	1 (1-2)	2 (2-3)	3 (3-3)	4 (4-4)	5 (4-5)	5 (5-6)	6 (6-6)	7 (6-7)	7 (7-8)	8 (7-8)
Stroke											
No. events	0	1,772	3,201	4,293	5,072	5,691	6,159	6,464	6,705	6,849	6,947
No. free of any events and death	40,673	33,867	26,948	22,037	17,496	13,731	10,426	7,419	5,464	3,486	1,705
No. deaths	0	1,186	1,886	2,407	2,819	3,167	3,433	3,590	3,720	3,836	3,881
No. censored	0	3,848	8,638	11,936	15,286	18,084	20,655	23,200	24,784	26,502	28,140
Cumulative event rate, % (95% CI)	0	5 (4-5)	9 (8-9)	12 (12-13)	16 (15-16)	18 (18-19)	21 (21-22)	23 (23-24)	26 (25-26)	28 (27-28)	30 (29-30)
Heart failure											
No. events	0	468	711	920	1,085	1,201	1,292	1,360	1,432	1,471	1,501
No. free of any events and death	41,842	35,879	29,563	24,878	20,307	16,345	12,648	9,192	6,825	4,460	2,241
No. deaths	0	1,343	2,225	2,926	3,495	3,987	4,388	4,655	4,875	5,037	5,101
No. censored	0	4,152	9,343	13,118	16,955	20,309	23,514	26,635	28,710	30,874	32,999
Cumulative event rate, % (95% CI)	0	1 (1-1)	2 (2-2)	3 (2-3)	3 (3-3)	4 (4-4)	4 (4-5)	5 (5-5)	5 (5-6)	6 (6-6)	7 (6-7)
All-cause mortality											
No. events	0	1,506	2,501	3,300	3,967	4,548	5,017	5,329	5,590	5,791	5,881
No. free of any events and death	42,335	36,624	30,221	25,548	20,894	16,826	13,053	9,519	7,108	4,649	2,336
No. censored	0	4,205	9,613	13,487	17,474	20,961	24,265	27,487	29,637	31,895	34,118
Cumulative event rate, % (95% CI)	0	4 (4-4)	7 (6-7)	9 (9-9)	12 (11-12)	14 (14-15)	17 (17-18)	19 (19-20)	22 (21-22)	24 (24-25)	26 (26-27)

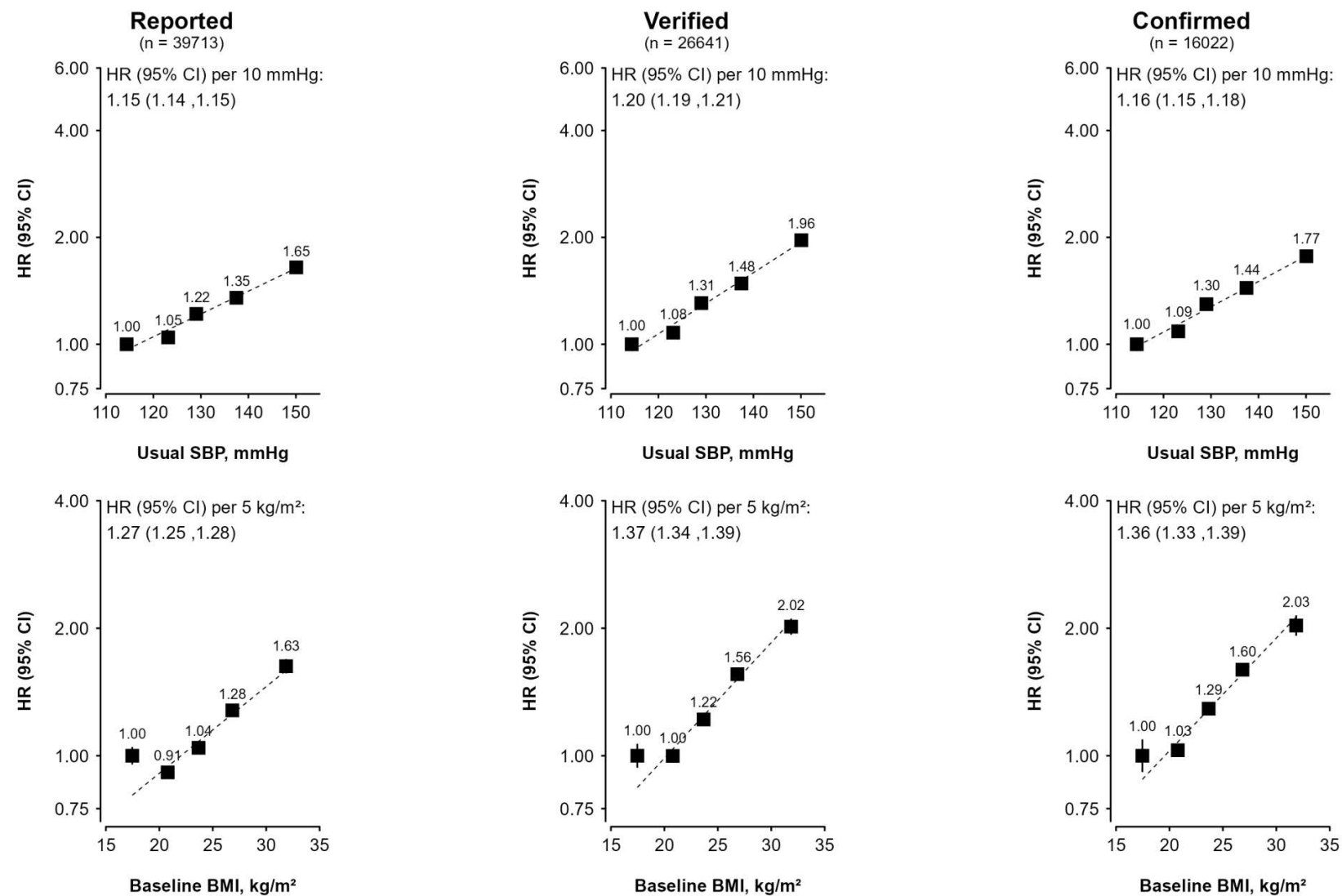
IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases.

Figure S1: Associations of SBP and BMI with risk of MI by adjudication status



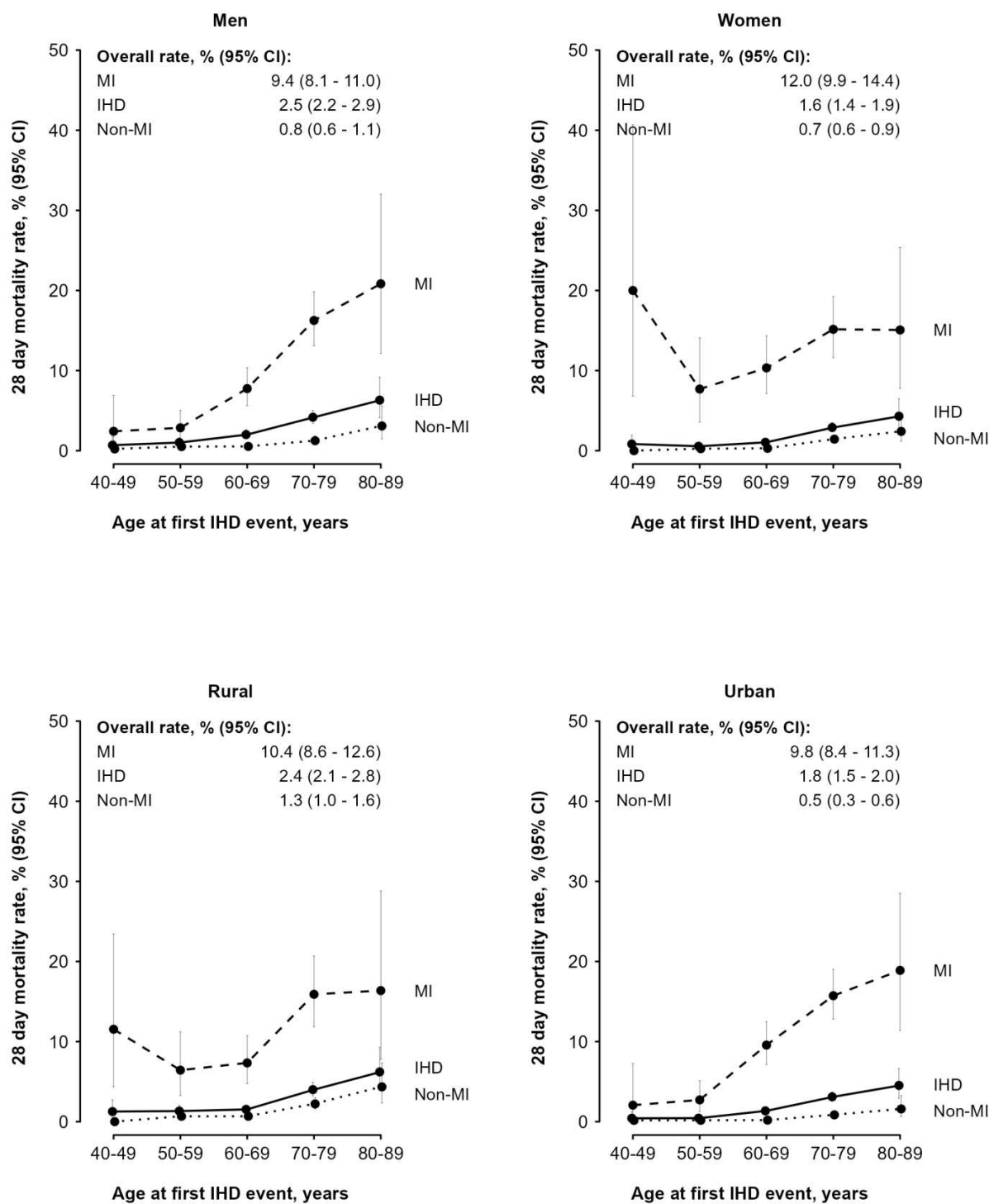
SBP = systolic blood pressure; BMI = body mass index; MI = myocardial infarction

Figure S2: Associations of SBP and BMI with risk of non-MI by adjudication status



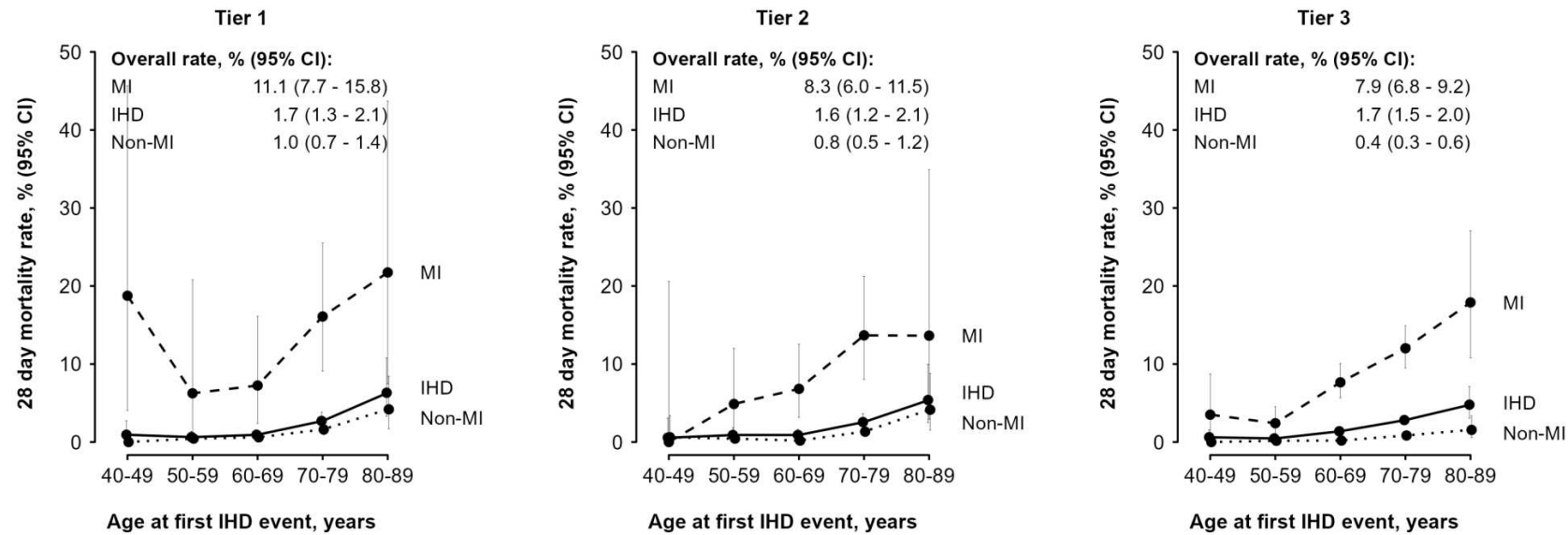
SBP = systolic blood pressure; BMI = body mass index; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S3: Age-specific 28-day case-fatality rates after first adjudicated event of different IHD types by sex and area



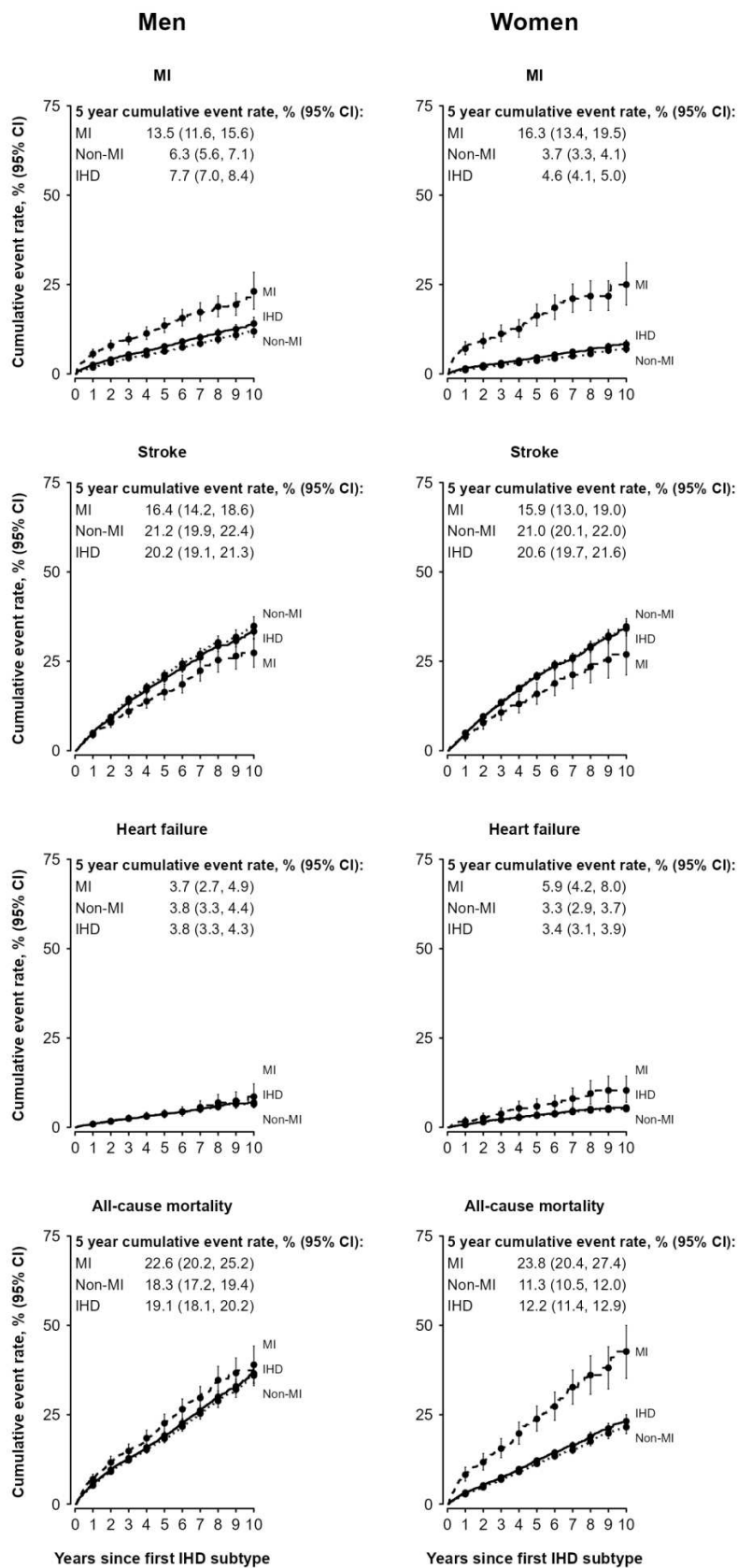
IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S4: Age-specific 28-day case-fatality rates after first adjudicated event of different IHD types by hospital tier



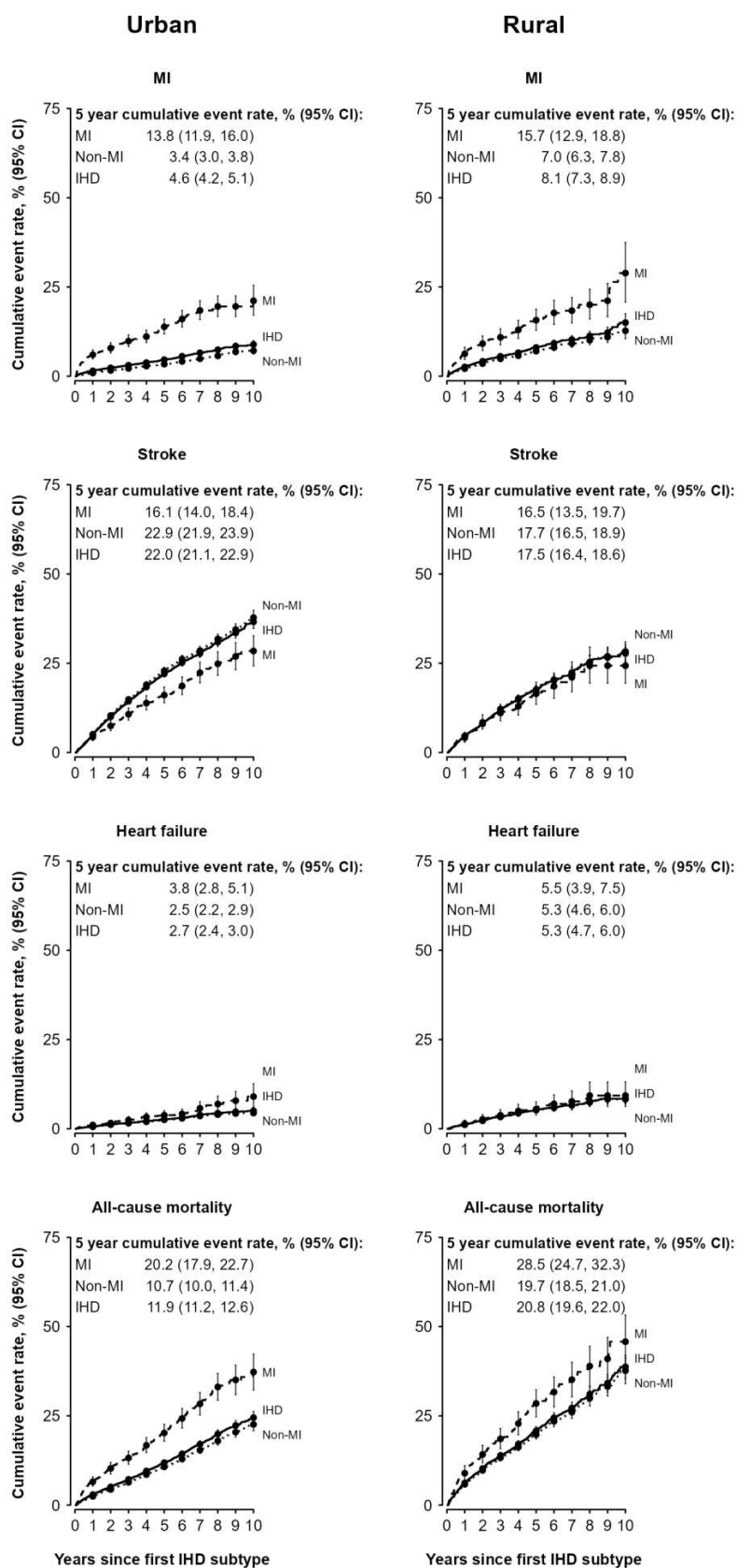
IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S5: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days after first adjudicated event of different IHD types by sex



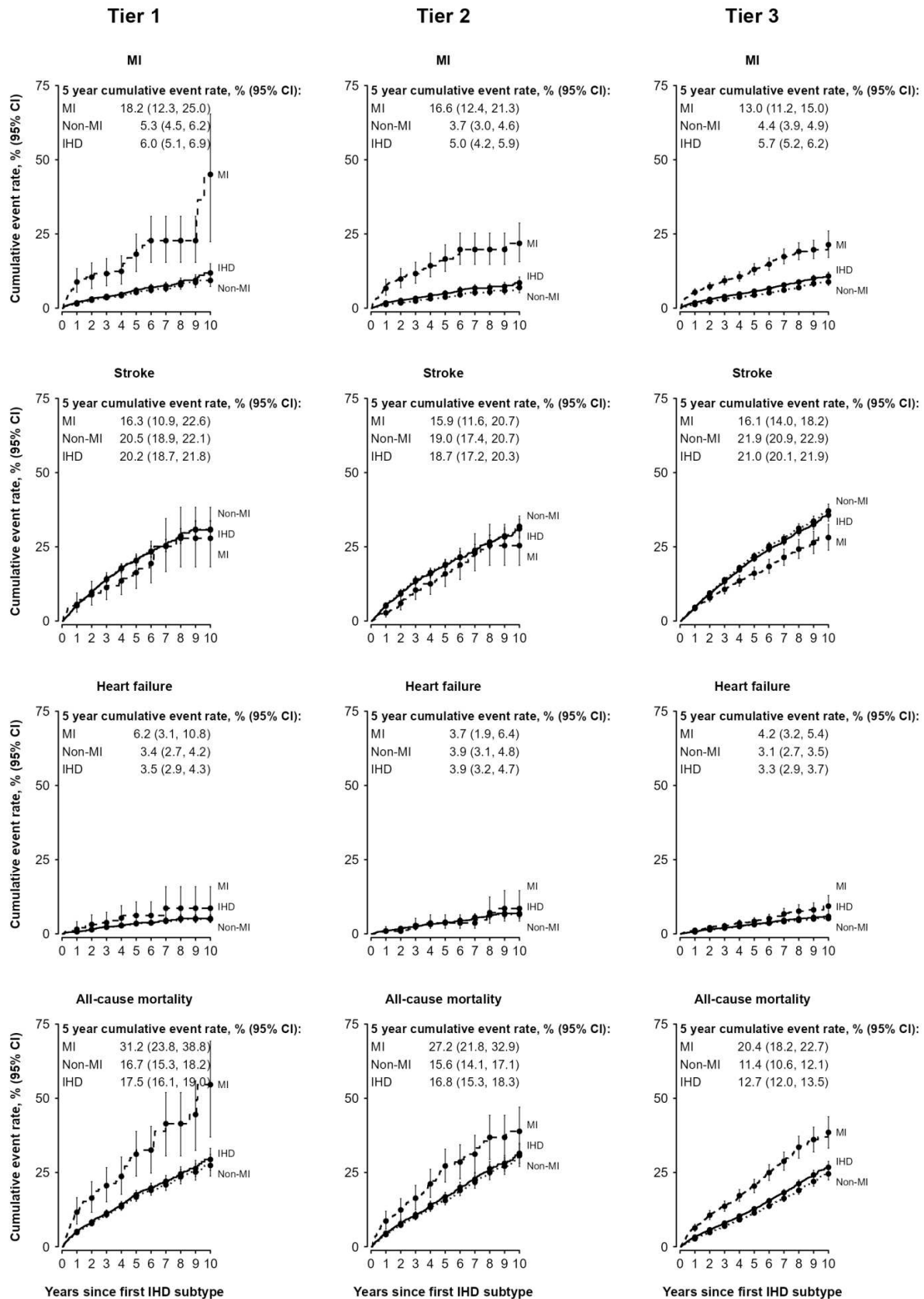
IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S6: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days after first adjudicated event of different IHD types by area



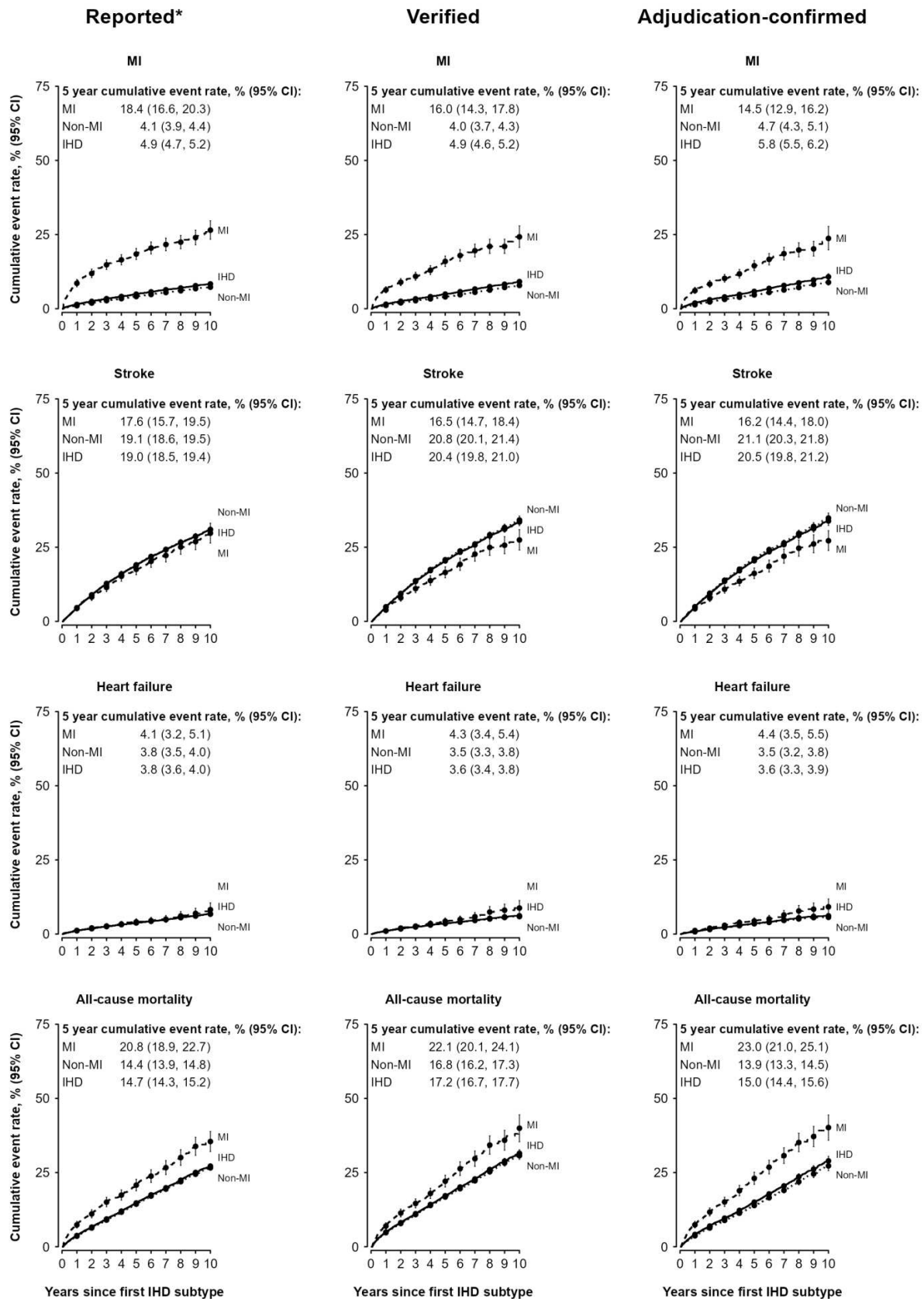
IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S7: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first adjudicated event of different IHD types by hospital tier



IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases

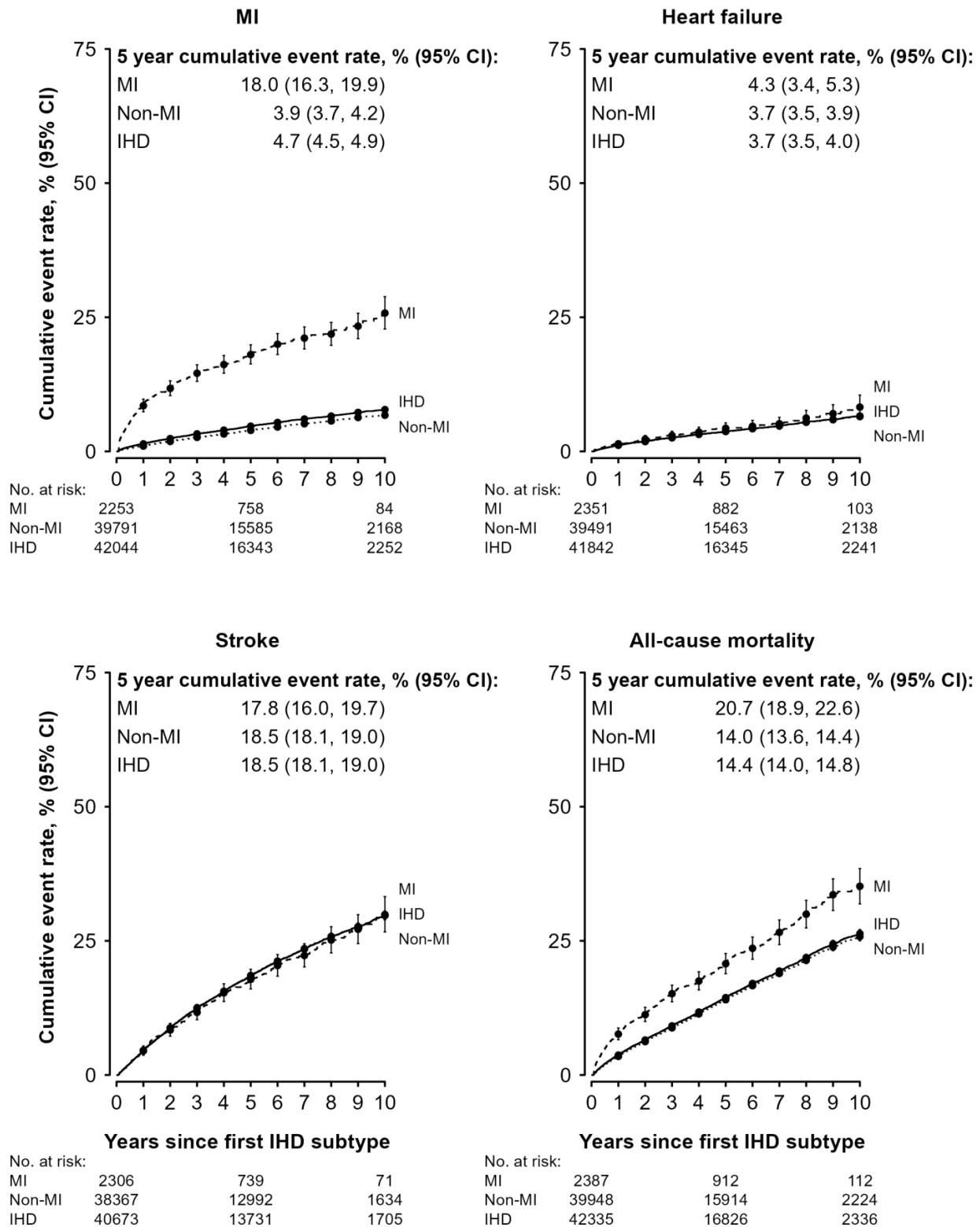
Figure S8: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first event of different IHD types by validation status



^^ Reported IHD cases with accessible records
 Excludes verified secondary IHD cases
 IHD = ischaemic heart disease; MI = myocardial infarction

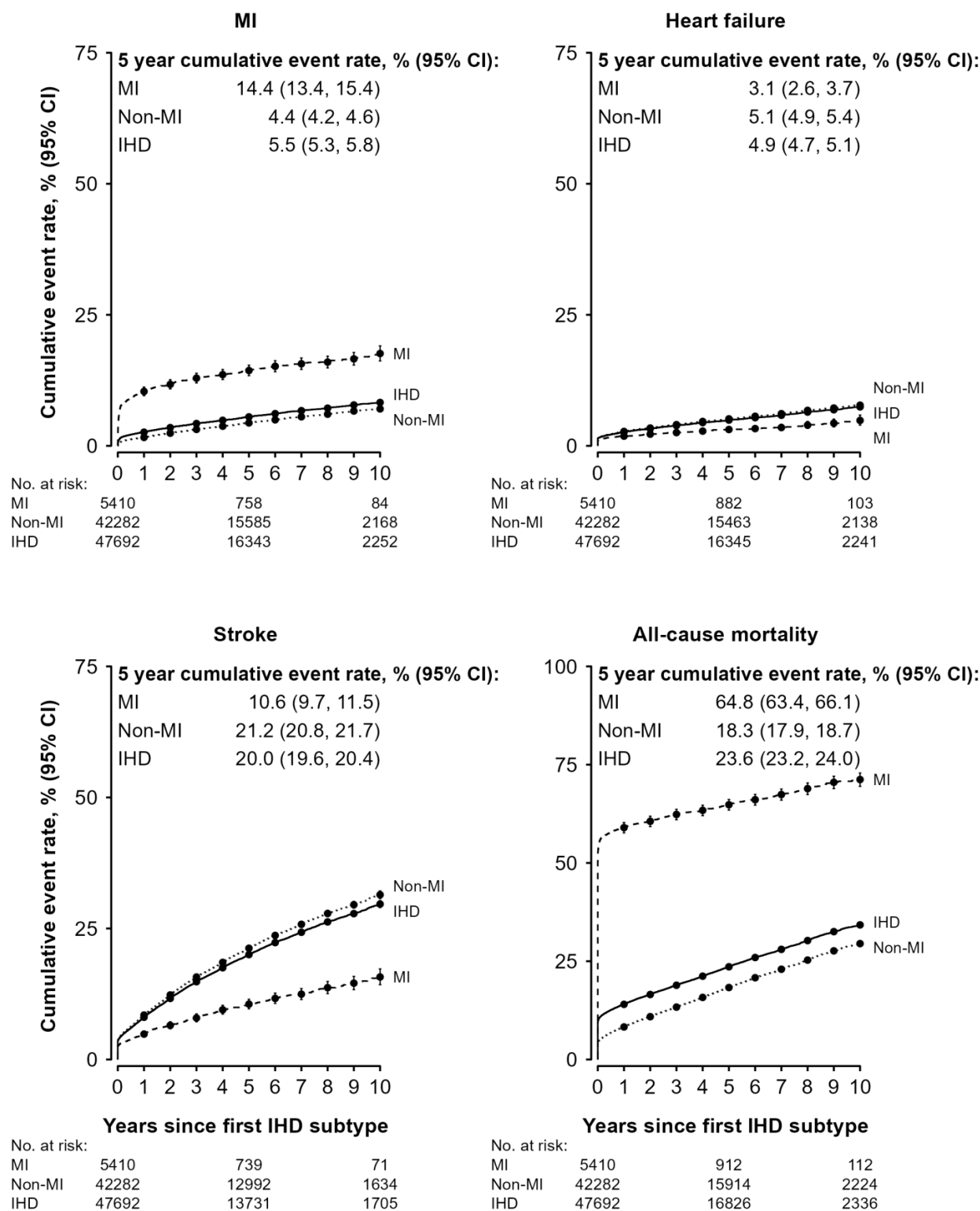
Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S9: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality from 28 days after first event of different IHD types



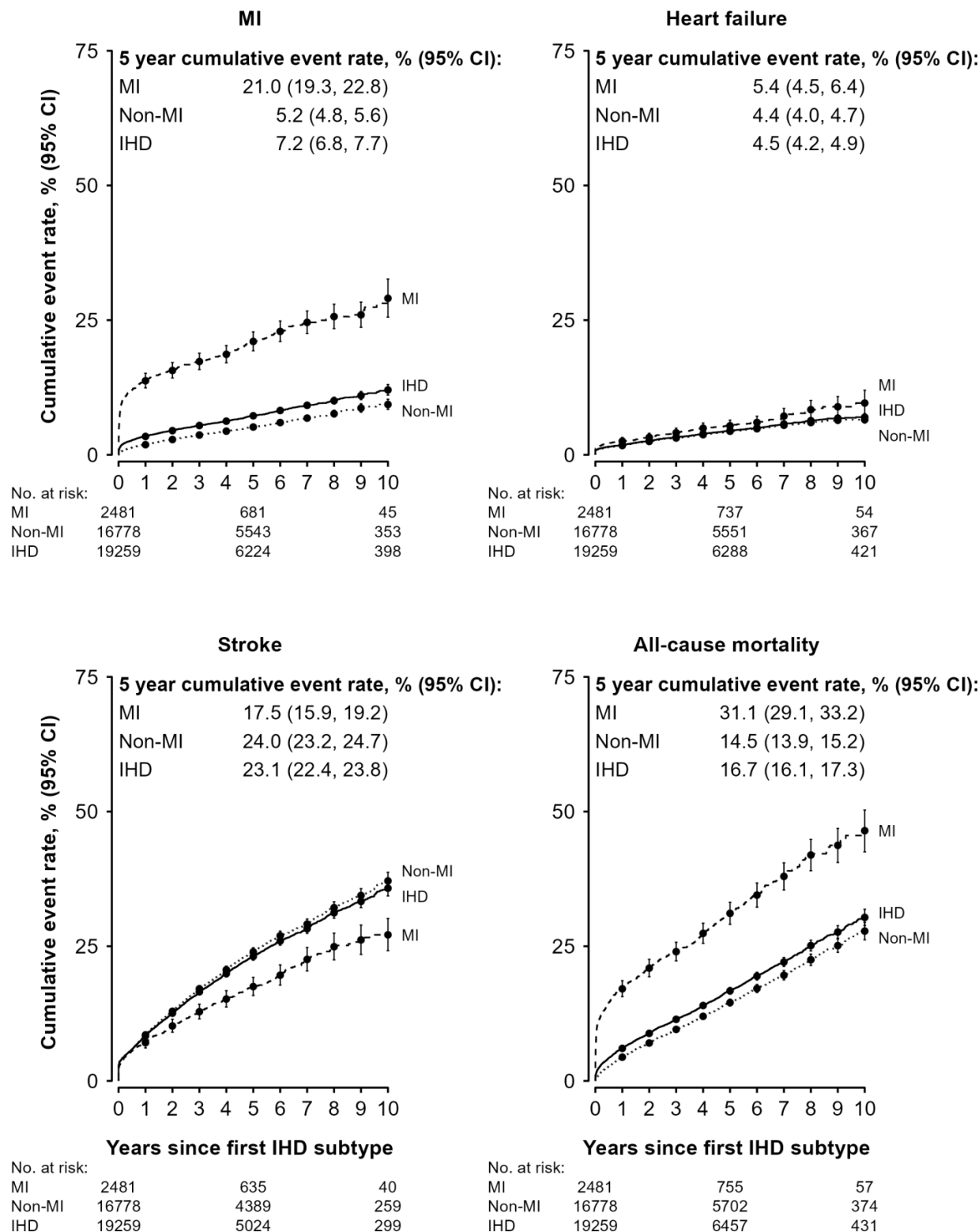
IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S10: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first event of different IHD types (combining before and after 28 days)



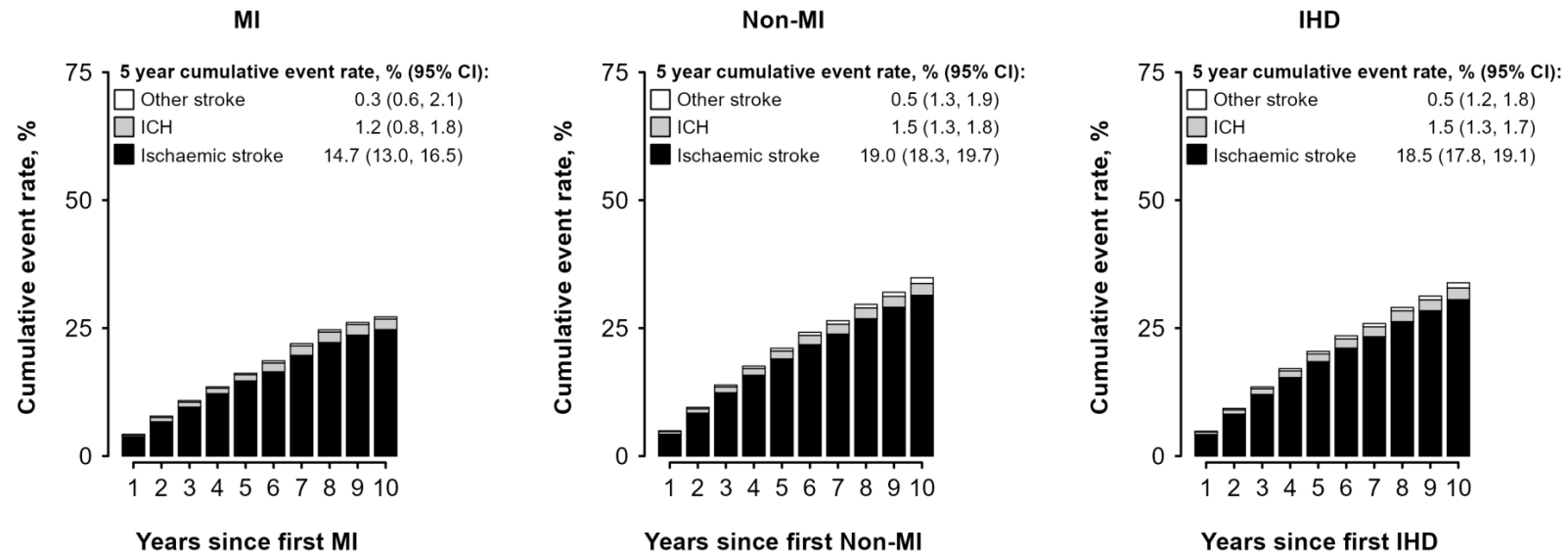
IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S11: Estimated cumulative event rate of recurrent MI events, stroke, heart failure and all-cause mortality following first adjudicated event of different IHD types (combining before and after 28 days)



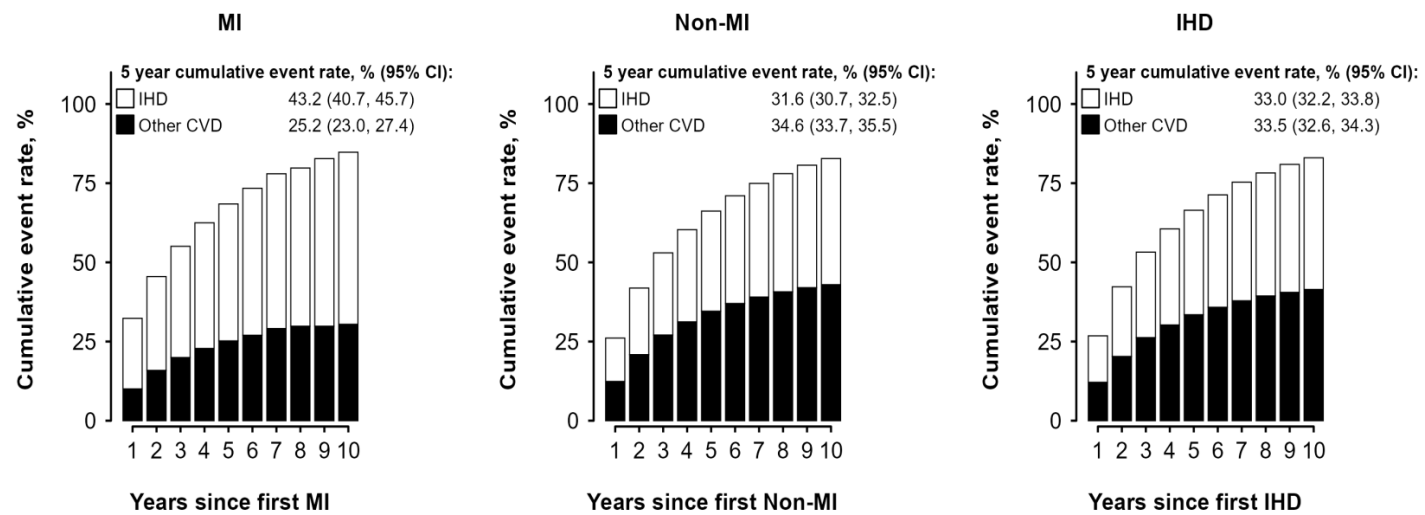
IHD = ischaemic heart disease; MI = myocardial infarction
 Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S12: Estimated cumulative event rate of stroke types from 28 days after first adjudicated event of different IHD types



MI = myocardial infarction; ICH = intracerebral haemorrhage
 Non-MI includes non-MI acute IHD and chronic IHD cases

Figure S13: Estimated cumulative event rate of ischaemic heart disease and other cardiovascular disease from 28 days after first adjudicated event of different IHD types



IHD = ischaemic heart disease; MI = myocardial infarction

