SUPPLEMENTARY FILE

Table of contents

INCLUDED DIAGNOSES

Table S1. ICD10-codes and ICD 10P-codes for diagnoses included in the study

Ischemic stroke Index year diagnosis I63.0, I63.1, I63.2, I63.3, I63.4, I63.5, I63.6, I63.8, I63.9 Recording period diagnosis I63.0, I63.1, I63.2, I63.3, I63.4, I63.5, I63.6, I63.8, I63.9, I64.9, I69.3, I69.4, I69.8, Z86.6B, Z86.7C ICD10P: I63.-, I64.-, I67.-P, I69.-
Transient ischemic attack (TIA) Index year diagnosis G45.0, G45.1, G45.3, G45.8, G45.9 Recording period diagnosis G45.0, G45.1, G45.3, G45.8, G45.9, Z86.6A, Z86.6B ICD10P: G45.-P , I69.-
Hemorrhagic stroke Index year diagnosis I61.0, I61.1, I61.2, I61.3, I61.4, I61.5, I61.6, I61.8, I61.9 Recording period diagnosis I61.0, I61.1, I61.2, I61.3, I61.4, I61.5, I61.6, I61.8, I61.9, I64.9, I69.1, I69.2, I69.4, I69.8, Z86.7C ICD-10P: I61.-P, I62, I64.-, I67.-P, I69.-
Acute coronary syndrome Index year diagnosis I20.0, I21.0, I21.1, I21.2, I21.3, I21.4, I21.4A, I21.4B, I21.4W, I21.4X, I21.9, I22.0, I22.1, I22.8, I22.9, I23.0, I23.1, I23.2, I23.3, I23.4, I23.5, I23.6, I23.8 Recording period diagnosis I20.0, I20.1, I20.8, I20.9, I21.0, I21.1, I21.2, I21.3, I21.4, I21.4A, I21.4B, I21.4W, I21.4X, I21.9, I22.0, I22.1, I22.8, I22.9, I23.0, I23.1, I23.2, I23.3, I23.4, I23.5, I23.6, I23.8, I24.0, I24.1, I24.8, I24.9, I25.0, I25.1, I25.2, I25.5, I25.6, I25.8, I25.9 ICD 10P: I20.0, I21.-P, I22, I23, I24, I25.-P

SENSITIVITY ANALYSIS - PATIENTS WITH MORE THAN ONE EVENT

In the main analysis of this paper, 5 221 patients were excluded from the study population because they had had hospital admissions with more than one of the studied diagnoses or because they had had hospital admissions with the same diagnosis in more than one index year. In the following sensitivity analysis, we analyze this sub-group of patients. It should be noted that patients with several hospital admission with the same diagnosis within the same index year were not excluded from the main analysis.

The 5 221 patients in the sub-group had a total of 11 458 events during the period 2010-2013. An event is defined as all discharge diagnoses in one diagnosis group in one index year for an individual. A patient with two ischemic strokes in one year is counted as only one event. A patient who has an ischemic stroke and a TIA in the same year is counted as two events. Likewise, a patient that has a TIA one year and another TIA the year after is also counted as two events.

In order to keep as much information as possible, we allowed patients to occur more than once in the analysis. A patient with two events, e.g. a TIA in 2010 and another TIA in 2011, was included twice in the material. Apart from that, the same exclusion criteria were applied as in the main analysis, see *figure S1,* and 5 885 events were finally included in the analysis.
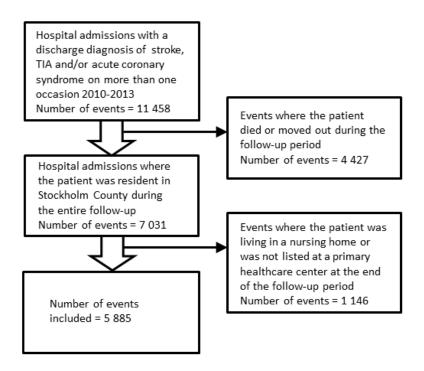
Figure S1 Selection of events included in analysis of strata of patients with multiple events.

Table S2 shows the absolute number and proportion of patients with and without a recorded diagnosis in primary care. The results are similar to the results of the groups in the main analysis when it comes to proportion of recorded patients. However, patients in the strata with multiple events had a recorded diagnosis in primary care to a slightly higher extent than those with only one event. The only exception was men with hemorrhagic stroke where 42 percent were recorded in the strata with multiple events and 43 percent were recorded in the main analysis.

Table S2. Absolute number and proportion in strata with multiple events, with and without a recorded diagnosis in primary care, by diagnosis (the same individual can occur more than once in the material).

	Recorded		**Not recorded**	
	Women	*Men*	*Women*	*Men*
TIA	136 (23%)	113 (16%)	465 (77%)	602 (84%)
Ischemic stroke	478 (46%)	672 (52%)	564 (54%)	622 (48%)
Hemorrhagic stroke	55 (40%)	78 (42%)	83 (60%)	107 (58%)
Acute coronary syndrome	305 (44%)	588 (48%)	382 (56%)	632 (52%)

Table S3 shows the absolute number and proportion of patients in strata with multiple events that were dispensed two prescriptions in the dispensation period, by sex, medication class, recorded/not recorded status, and diagnosis. In 18 out of 22 groups, the results point in the same direction as in the main analysis, that recorded patients are dispensed two medications to a higher extent than not recorded patients in most groups.

Table S3. Absolute number and proportion in strata with multiple events that were dispensed two prescriptions in the dispensation period, by sex, medication class, recorded/not recorded status, and diagnosis (the same individual can occur more than once in the material).

			Statins	Antithrombotics	Antihypertensives	Beta-blockers
TIA	Women	Not recorded	244 (52 %)	418 (90 %)	398 (86 %)	
		Recorded	69 (51 %)	127 (93 %)	104 (76 %)	
	Men	Not recorded	410 (68 %)	527 (88 %)	481 (80 %)	
		Recorded	94 (81 %)	113 (97 %)	96 (83 %)	
Ischemic stroke	Women	Not recorded	290 (51 %)	480 (85 %)	483 (86 %)	
		Recorded	293 (61 %)	417 (87 %)	394 (82 %)	
	Men	Not recorded	410 (66 %)	518 (83 %)	507 (82 %)	
		Recorded	477 (71 %)	604 (90 %)	552 (82 %)	
Hemorrhagic stroke	Women	Not recorded			49 (59 %)	
		Recorded			40 (73 %)	
	Men	Not recorded			85 (79 %)	
		Recorded			69 (88 %)	
Acute coronary syndrome	Women	Not recorded	205 (54 %)	331 (87 %)	352 (92 %)	304 (80 %)
		Recorded	205 (67 %)	287 (94 %)	293 (96 %)	256 (84 %)
	Men	Not recorded	467 (74 %)	556 (88 %)	574 (91 %)	498 (79 %)
		Recorded	468 (80 %)	525 (89 %)	551 (94 %)	491 (84 %)

When adjusting for confounders (Table S4), the confidence intervals are wider for the strata with multiple events because of the lower number of included observations. The differences between the recorded and not recorded group are statistically significant to a lesser extent than in the main analysis.

Table S4. Crude and adjusted odds ratios for being dispensed two prescriptions in the dispensation period according to recorded/not recorded status, by diagnosis. Patients that are not recorded are the reference group. Odds Ratios >1 mean recorded patients are more likely to have two dispensations in the dispensation period (the same individual can occur more than once in the material).

	Crude Odds Ratios (95% Confidence Intervals)	Adjusted Odds Ratios* (95% Confidence Intervals)
TIA		
Statins	1.06 (0.79-1.43)	1.15 (0.85-1.56)
Antithrombotics	2.53 (1.20-5.30)	2.54 (1.19-5.40)
Antihypertensives	0.68 (0.48-0.97)	0.67 (0.47-0.97)
Ischemic stroke		
Statins	1.35 (1.13-1.61)	1.32 (1.09-1.59)
Antithrombotics	1.52 (1.15-2.01)	1.68 (1.25-2.25)
Antihypertensives	0.87 (0.69-1.10)	0.97 (0.75-1.25)
Hemorrhagic stroke		
Antihypertensives	1.74 (0.98-3.06)	1.70 (0.89-3.24)
Acute coronary syndrome		
Statins	1.48 (1.19-1.85)	1.57 (1.25-1.98)
Antithrombotics	1.63 (1.12-2.36)	1.71 (1.18-2.49)
Antihypertensives	1.43 (0.93-2.19)	1.48 (0.96-2.29)
Beta-blockers	1.34 (1.04-1.73)	1.35 (1.04-1.75)

* Adjustments made for age, sex, index year, and visits to private specialists. To account for clustering, standard errors are based on the "sandwich" variance estimator.

INCLUDED MEDICATIONS

Table S5. ATC-codes for medications included in the study

Statins
C10AA
Antithrombotics
B01AC04, B01AC06, B01AC07, B01AC22, B01AC24, B01AC30, B01AA, B01AE07, B01AF
Antihypertensives
C03A, C03B, C03C, C03D, C03E, C07, C08, C09
Beta-blockers
C07

DESCRIPTIVE STATISTICS

Table S6. Mean age of men and women by recorded/not recorded status and diagnosis. Also proportion of men and women with at least one visit to a private specialist during the recording period, by recorded/not recorded status and diagnosis.

		Recorded		Not recorded	
		Women	*Men*	*Women*	*Men*
TIA	*Mean age*	73.1	71.4	73.7	70.5
	At least one visit to private specialist	20%	17%	21%	23%
Ischemic stroke	*Mean age*	71.9	69.9	74.3	70.5
	At least one visit to private specialist	16%	14%	18%	20%
Hemorrhagic stroke	*Mean age*	67.4	62.9	67.6	63.7
	At least one visit to private specialist	19%	15%	9%	14%
Acute coronary syndrome	*Mean age*	74.0	67.9	73.7	67.0
	At least one visit to private specialist	22%	21%	26%	33%

RESULTS STRATIFIED BY SEX

Table S7. Crude and adjusted odds ratios for being dispensed two prescriptions in the dispensation period according to recorded/not recorded status, by diagnosis and sex. Not recorded patients are the reference group. Odds Ratios >1 means recorded patients are more likely to have two dispensations in the dispensation period.

	Women		Men	
	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)
TIA				
Statins	1.53 (1.21-1.93)	1.48 (1.17-1.88)	1.63 (1.26-2.11)	1.59 (1.23-2.06)
Antithrombotics	2.37 (1.63-3.44)	2.49 (1.69-3.68)	2.30 (1.50-3.53)	2.19 (1.43-3.37)
Antihypertensives	0.75 (0.59-0.95)	0.73 (0.57-0.94)	0.93 (0.72-1.21)	0.88 (0.67-1.16)
Ischemic stroke				
Statins	1.64 (1.41-1.91)	1.63 (1.40-1.90)	1.50 (1.30-1.74)	1.54 (1.33-1.79)
Antithrombotics	1.88 (1.49-2.37)	2.13 (1.66-2.71)	1.66 (1.33-2.07)	1.79 (1.43-2.24)
Antihypertensives	0.96 (0.81-1.14)	1.11 (0.92-1.34)	1.13 (0.97-1.33)	1.22 (1.04-1.44)
Hemorrhagic stroke				
Antihypertensives	1.33 (0.80-2.20)	1.48 (0.82-2.67)	3.26 (2.01-5.27)	3.88 (2.25-6.70)
Acute coronary syndrome				
Statins	1.69 (1.42-2.01)	1.75 (1.47-2.09)	1.49 (1.30-1.71)	1.58 (1.38-1.82)
Antithrombotics	2.70 (2.03-3.60)	2.69 (2.02-3.59)	1.65 (1.35-2.02)	1.75 (1.43-2.15)
Antihypertensives	2.08 (1.50-2.89)	2.04 (1.47-2.85)	1.63 (1.33-2.00)	1.66 (1.35-2.04)
Beta-blockers	1.61 (1.31-1.97)	1.57 (1.28-1.93)	1.45 (1.27-1.67)	1.45 (1.26-1.66)

* Adjustments made for age, index year, and visits to private specialists. To account for clustering, standard errors are based on the "sandwich" variance estimator.