

**Table 1.** Characteristics of all included deceased stroke patients who died within one year after an index stroke and of the subpopulations with and without data on end of life care. P values indicate chi-square testing of differences between all deceased patients vs. patients with data available at the end of life, excluding patients with missing information.

Patient characteristics	All deceased (n=42 502)	Data on end of life care (n=16 408)	No data on end of life care (n=26 094)	p value
Sex				
Male	18 803 (44%)	7075 (43%)	11 728 (45%)	<0.001
Female	23 699 (56%)	9333 (57%)	14 366 (55%)	
Mean age, years				
At death	82.3	83.1	81.8	<0.001
Living alone*				
Yes	26 637 (63%)	10 593 (65%)	16 044 (62%)	<0.001
No	15 427 (36%)	5671 (35%)	9756 (37%)	
Information missing	438 (1%)	144 (1%)	294 (1%)	
Comorbidity*				
Previous stroke				
Yes	9351 (22%)	3162 (19%)	6189 (24%)	<0.001
No	32 411 (76%)	13 021 (79%)	19 390 (74%)	
Information missing	740 (2%)	225 (1%)	515 (2%)	
Atrial fibrillation				
Yes	17 786 (42%)	6925 (42%)	10 861 (42%)	0.588
No	24 073 (57%)	9310 (57%)	14 763 (57%)	
Information missing	643 (2%)	173 (1%)	470 (2%)	
Diabetes				
Yes	9283 (22%)	3597 (22%)	5686 (22%)	0.987
No	32 709 (77%)	12 671 (77%)	20 038 (77%)	
Information missing	510 (1%)	140 (1%)	370 (1%)	
Hypertension				
Yes	26 122 (62%)	10 544 (64%)	15 578 (60%)	<0.001
No	15 486 (36%)	5624 (34%)	9862 (38%)	
Information missing	894 (2%)	240 (2%)	654 (3%)	
Level of consciousness on admission for index stroke*				
Fully conscious	23 250 (55%)	9675 (59%)	13 575 (52%)	<0.001
Drowsy	11 227 (26%)	4169 (25%)	7058 (27%)	
Unconscious	7321 (17%)	2259 (14%)	5062 (19%)	
Information missing	704 (2%)	305 (2%)	399 (2%)	
Place of death**				
In hospital	26 504 (62%)	9199 (56%)	17 305 (66%)	<0.001
In nursing home	11 121 (26%)	5543 (34%)	5578 (21%)	
At home	1617 (4%)	629 (4%)	988 (4%)	
Other, unknown	3260 (8%)	1037 (6%)	2223 (9%)	

\*Recorded at index stroke in the Riksstroke register

\*\*As recorded in the Cause of Death register

\*\*\*Excluded from test

**Table 2.** Characteristics of end of life care in deceased patients during the years 2007 through 2014 who had died within a year from the index stroke and had data both in the Riksstroke register and in the Swedish Register of Palliative Care (n=16 408). Logistic regression analysis with dependent variables coded yes/no or no information and as day(s)/all other response alternatives. Adjusted for gender, age and level of consciousness on admission to hospital (as a proxy for stroke severity).

	Own home	In hospital	Nursing home	Other, unknown	All
Expected death					
Yes	545 (87%)	7791 (85%)	4798 (87%)	852 (82%)	13 986 (85%)
No	69 (11%)	967 (10%)	567 (10%)	129 (12%)	1732 (11%)
No information	15 (2%)	441 (5%)	178 (3%)	56 (5%)	690 (4%)
Odds ratio (95% CI)	Ref.	0.77 (0.60-0.98)	0.88 (0.69-1.13)	0.64 (0.48-0.85)	----
Response to the question "Did the place of death comply with the request last stated by the person?"					
Yes	489 (78%)	554 (6%)	2132 (39%)	251 (24%)	3426 (21%)
No or no information	140 (22%)	8645 (94%)	3411 (61%)	786 (76%)	12 982 (79%)
Odds ratio (95% CI)	Ref.	0.02 (0.02-0.03)	0.19 (0.16-0.23)	0.10 (0.08-0.13)	---
Intravenous fluid or tube feeding during last day of life					
Yes	11 (2%)	2415 (26%)	299 (5%)	177 (17%)	2902 (18%)
No	414 (66%)	4163 (45%)	3414 (62%)	543 (52%)	8534 (52%)
No information	204 (32%)	2621 (29%)	1830 (33%)	317 (31%)	4972 (30%)
Odds ratio (95% CI)	Ref.	21.9 (11.7-41.1)	3.9 (2.0-7.3)	13.1 (6.9-25.0)	---
Last examination before death by a physician					
Day(s)	219 (35%)	6550 (71%)	2149 (39%)	557 (54%)	9475 (58%)
Week(s)	156 (25%)	49 (1%)	1224 (22%)	131 (13%)	1560 (10%)
A month or more	43 (7%)	7 (0%)	259 (5%)	22 (2%)	331 (2%)
No information	211 (33%)	2593 (28%)	1911 (34%)	327 (31%)	5042 (30%)
Odds ratio (95% CI)	Ref.	4.33 (3.64-5.15)	1.13 (0.94-1.34)	2.07 (1.68-2.54)	---

**Table 3.** Presence of another person at the time of death, n=16 408. Multiple regression logistic analysis includes all variables listed in the table.

	None n (%)	Next of kin (with or without staff present) n (%)	Staff only n (%)	Information missing** n (%)	Multiple logistic regression odds ratios (95% CI)
All	3315 (20)	8106 (49)	4481 (27)	506 (3)	
Sex					
Men	1452 (21)	3506 (50)	1914 (27)	203 (3)	Ref.
Women	1863 (20)	4600 (49)	2567 (28)	303 (3)	1.03 (0.95-1.11)
Age at death					
<55	19 (11)	114 (66)	37 (22)	2 (1)	Ref.
55-64	85 (16)	288 (55)	128 (25)	19 (4)	0.51 (0.34-1.02)
65-74	360 (19)	1057 (55)	457 (24)	59 (3)	0.52 (0.32-0.87)
75-84	983 (19)	2652 (51)	1403 (27)	153 (3)	0.53 (0.33-0.88)
≥85	1868 (22)	3995 (47)	2456 (29)	273 (3)	0.48 (0.29-0.78)
Living condition*					
Married/cohabitating	954 (17)	3341 (59)	1232 (22)	144 (3)	Ref.
Single	2337 (22)	4696 (44)	3200 (30)	359 (3)	0.73 (0.67-0.80)
Information missing**	24 (17)	69 (48)	49 (34)	2 (1)	

\*Recorded at the time of index stroke

\*\*Excluded from test

## Supplementary tables

Supplementary Table 1. Underlying causes of death at different times after index stroke as recorded in the routine Cause of Death Register. Percentages refer to distribution of causes within each time interval.

Underlying causes of death	Time interval from index stroke				
	0-7 days	8-28 days	29-90 days	91-365 days	Total
Cerebrovascular disorders					
Intracerebral hemorrhage (I61)	3543 (32%)	1095 (12%)	412 (6%)	328 (3%)	5378 (14%)
Ischemic (I63)	3043 (28%)	3003 (32%)	1383 (19%)	846 (8%)	8275 (22%)
Other, late and undetermined (I60, I62, I64-I69)	1331 (12%)	1742 (19%)	1698 (23%)	2190 (20%)	6961 (18%)
Total cerebrovascular (I69-I69)	7917 (72%)	5840 (63%)	3493 (47%)	3364 (31%)	20614 (54%)
Ischemic heart disease (I20-I25)	743 (7%)	870 (9%)	1092 (15%)	1762 (16%)	4609 (12%)
Other circulatory (I00-I15, I70-I99)	1946 (17%)	1663 (18%)	1172 (16%)	1904 (18%)	6685 (17%)
Other diseases	372 (3%)	882 (10%)	1691 (23%)	3753 (35%)	6658 (17%)

Supplementary Table 2. Patients with a first-ever stroke compared to the total population (first-ever and recurrent strokes) that died within a year after index stroke. Based on 32 411 (first-ever) to 42 502 (first-ever and recurrent) deaths in the Cause of Death Register and 13 021 (first-ever) to 16 408 (first-ever plus recurrent) deaths in the Swedish Register of Palliative Care.

	First-ever events	Total stroke population
Sex*		
Men	14 023 (43%)	18 803 (44%)
Women	18 388 (57%)	23 699 (59%)
Age at death, years, mean**	82.2	82.3
Place of death in the 91-365-day interval **, ‡		
In hospital	3258 (36%)	4193 (36%)
In nursing home	4023 (45%)	5456 (46%)
At home	838 (9%)	1062 (9%)
Other, unknown	836 (9%)	1081 (9%)
Unexpected death †	1392 (11%)	1731 (11%)
Presence at time of death †		
Next of kin	6445 (51%)	8106 (51%)
Unattended	2609 (21%)	3315 (21%)

\*Data from Riksstroke

\*\*Data from the Cause of Death Register

†Data from SRPC

‡Based on 8955 deaths in this time interval