

Table 1. Baseline demographic and clinical characteristics of cases of community-acquired pneumonia and corresponding matched controls.

Characteristics	Cases (n = 2,251)	Controls[‡] (n = 22,178)
Duration of follow-up, median (IQR)* [days]	298 (124-499)	298 (124-499)
Age (years), mean (SD)*	73.4 (11.4)	73.4 (11.4)
Male, n (%)*	1,211 (53.8)	11,922 (53.8)
Year of cohort entry*		
1998	10 (0.4)	92 (0.4)
1999	20 (0.9)	200 (0.9)
2000	44 (2.0)	359 (1.7)
2001	66 (2.9)	665 (3.0)
2002	126 (5.6)	1,296 (5.9)
2003	217 (9.6)	2,071 (9.3)
2004	312 (13.9)	3,167 (14.1)
2005	229 (10.2)	2,245 (10.1)
2006	287 (12.7)	2,765 (12.5)
2007	245 (10.9)	2,493 (11.2)
2008	266 (11.8)	2,565 (11.6)
2009	243 (10.8)	2,360 (10.7)
2010	145 (6.4)	1,488 (6.7)
2011	41 (1.8)	412 (1.8)
Body mass index, n (%)		
≥ 30 kg/m ²	491 (21.8)	4,473 (19.9)
< 30 kg/m ²	1,208 (53.7)	12,428 (56.0)
Unknown	552 (24.5)	5,277 (24.0)
Smoking status, n (%)		
Ever	1,437 (63.8)	11,291 (50.7)
Never	611 (27.1)	8,600 (38.8)
Unknown	203 (9.0)	2,287 (10.5)
Comorbidities [†] , n (%)		
Asthma	88 (3.9)	424 (1.9)
Alcohol-related comorbidities, n (%)	152 (6.8)	953 (4.3)
Chronic obstructive pulmonary disease	332 (14.7)	845 (3.8)
Pneumonia	68 (3.0)	172 (0.8)
Diabetes mellitus	493 (21.9)	4,388 (19.7)
Hypertension	488 (21.7)	4,191 (18.9)
Prior stroke	227 (10.1)	1,312 (6.1)
Prior myocardial infarction	128 (5.7)	526 (2.5)
Prior coronary revascularization	33 (1.5)	177 (0.8)
No. general practitioner visits in the past year		
> 4 visits	392 (17.4)	2,475 (11.4)
≤ 4 visits	1,859 (82.6)	19,703 (88.6)
Medications [†] in the year prior to cohort entry		
No. of distinct drug classes		
> 4 classes	2,111 (93.8)	19,648 (88.7)
≤ 4 classes	140 (6.2)	2,530 (11.3)
Influenza vaccine	1,574 (69.9)	14,643 (66.2)

Pneumococcal vaccine	859 (38.2)	8,323 (37.5)
Immunosuppressive agents	52 (2.3)	167 (0.7)
Inhaled bronchodilators	704 (31.3)	2,804 (12.6)
Inhaled corticosteroids	243 (10.8)	738 (3.3)
Systemic antibiotics	1,184 (52.6)	8,016 (36.3)
Systemic corticosteroids	385 (17.1)	1,257 (5.7)

Abbreviations: IQR, interquartile range; SD, standard deviation.

* Variable on which cases and controls were matched.

† Comorbidities and prescriptions were defined within the year prior to cohort entry; lifestyle variables (smoking, obesity, and pneumococcal vaccine) were defined within 5 years prior to cohort entry.

‡ Proportions for controls were weighted by the number of controls per case for all variables.

Table 2. The association between current use of higher potency statin and HCAP compared with lower potency statin*.

Current exposure[†]	Cases (n = 2,251)	Controls (n = 22,178)	Crude HR (95% CI)[*]	Adjusted HR (95% CI)^{*,‡}
Lower potency statin, No. (%)	963 (42.8)	10,439 (46.1)	1.00 (Reference)	1.00 (Reference)
Higher potency statin, No. (%)	824 (36.6)	7,356 (33.1)	1.24 (1.12-1.38)	1.14 (1.03-1.27)
Duration of current use				
<120 days, No (%)				
Lower potency statin	294 (13.1)	3,101 (14.0)	1.00 (Reference)	1.00 (Reference)
Higher potency statin	280 (12.4)	2,405 (10.8)	1.24 (1.03-1.50)	1.18 (0.97-1.43)
120-365 days, No (%)				
Lower potency statin	342 (15.2)	3,777 (17.0)	1.00 (Reference)	1.00 (Reference)
Higher potency statin	285 (12.7)	2,731 (12.3)	1.18 (0.99-1.40)	1.09 (0.91-1.30)
366-730 days, No (%)				
Lower potency statin	327 (14.5)	3,561 (16.0)	1.00 (Reference)	1.00 (Reference)
Higher potency statin	259 (11.5)	2,220 (10.0)	1.30 (1.09-1.55)	1.18 (0.98-1.41)

Abbreviations: HR, hazard ratio; CI, confidence interval; HCAP, hospitalization for community-acquired pneumonia.

*Cases and controls were matched on sex, age, cohort entry date, and duration of follow-up.

[†] Patients exposed to recent or past use are not displayed in the table, but were included in the conditional logistic regression model to allow for proper estimation of treatment effects.

[‡] Adjusted for smoking, history of asthma, COPD, or non-hospitalized pneumonia in the year before cohort entry, use of immunosuppressive agents, inhaled bronchodilators, inhaled corticosteroids, systemic antibiotics, and systemic corticosteroids, pneumococcal vaccine, influenza vaccine and propensity score deciles. An indicator variable for an index date during summer (defined as April to September) was also included.

Table 3. Secondary analyses examining the association between the use of higher potency statins and HCAP compared with lower potency statin, with cases restricted to fatal pneumonia*.

Current exposure [†]	Cases (n = 2,251)	Controls (n = 22,178)	Crude HR (95% CI) [*]	Adjusted HR (95% CI) ^{*,‡}
Definition 1: HCAP with in-hospital death				
Lower potency statin, No. (%)	253 (44.2)	2,763 (49.2)	1.00 (Reference)	1.00 (Reference)
Higher potency statin, No. (%)	212 (37.0)	1,738 (30.9)	1.37 (1.12-1.68)	1.29 (1.04-1.59)
Definition 2: HCAP with in-hospital death within 30 days of HCAP admission				
Lower potency statin, No. (%)	209 (43.5)	2,289 (48.8)	1.00 (Reference)	1.00 (Reference)
Higher potency statin, No. (%)	179 (37.3)	1,476 (31.4)	1.37 (1.10-1.71)	1.27 (1.01-1.60)
Definition 3: HCAP with death within 30 days of admission, regardless of location [£]				
Lower potency statin, No. (%)	222 (42.9)	2,429 (48.1)	1.00 (Reference)	1.00 (Reference)
Higher potency statin, No. (%)	195 (37.7)	1,608 (31.8)	1.37 (1.11-1.69)	1.26 (1.01-1.57)

Abbreviations: HR, hazard ratio; CI, confidence interval; HCAP, hospitalization for community-acquired pneumonia.

* Cases and controls were matched on sex, age, cohort entry date, and duration of follow-up.

[†] Patients with recent or past use are not displayed in the table but were included in the conditional logistic regression model to allow for proper estimation of treatment effects.

[‡] Adjusted for smoking, history of asthma, COPD, or non-hospitalized pneumonia in the year before cohort entry, use of immunosuppressive agents, inhaled bronchodilators, inhaled corticosteroids, systemic antibiotics, and systemic corticosteroids, pneumococcal vaccine, influenza vaccine and propensity score deciles. An indicator variable for an index date during summer (defined as April to September) was also included.

[£] Defined using the first record of death in HES or CPRD within 30 days of the HCAP admission.