

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

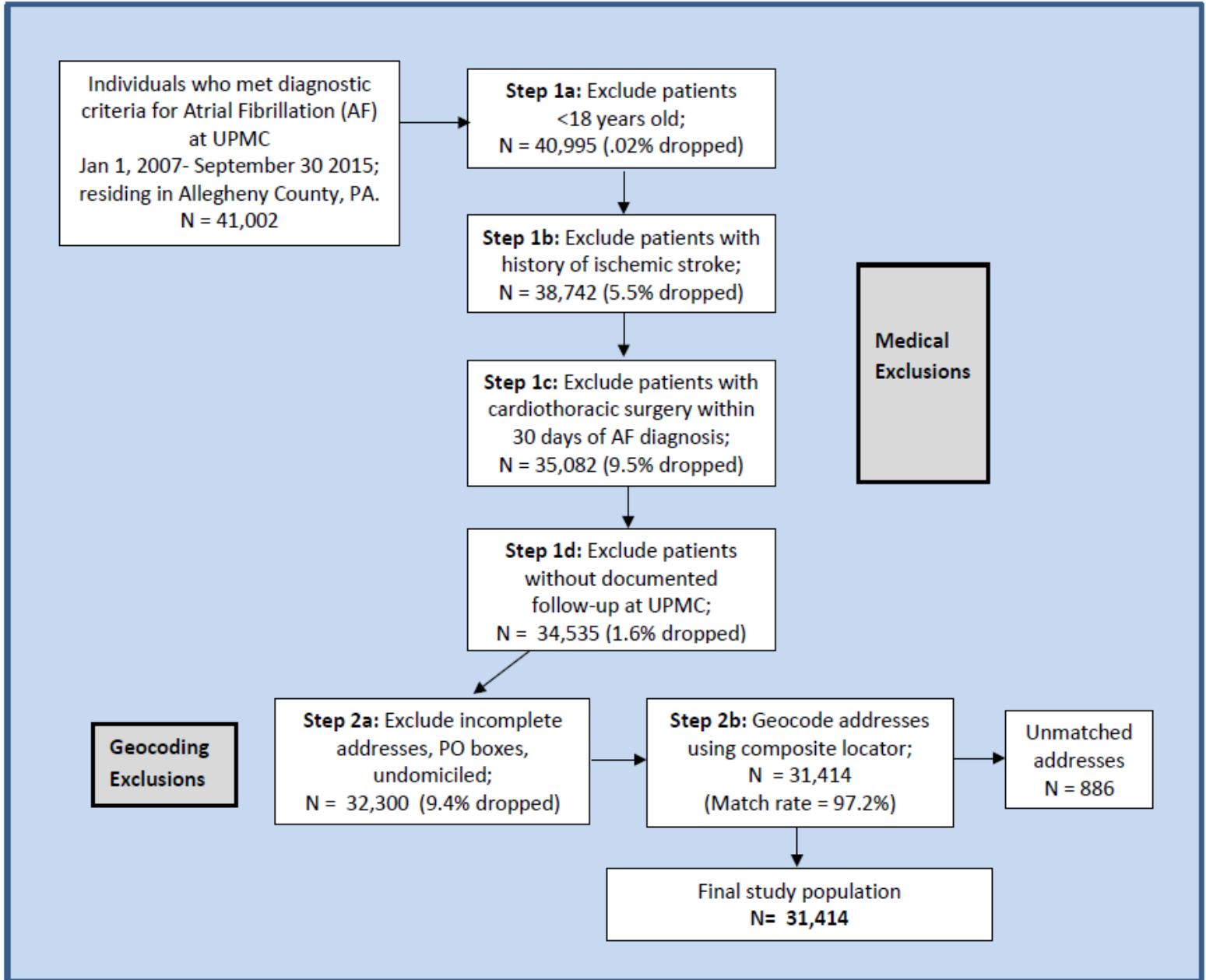
eTable 1. International Classification of Diseases Ninth Revision (ICD-9) Code-Based Definitions	
Medical Comorbidity	ICD-9 Codes
Hemorrhagic stroke (hospitalization with any of the following as 1 st diagnosis)	430, 431, 432, 432.1, 432.9
Ischemic or other stroke (hospitalization with any of the following as 1 st diagnosis)	433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91, 436
TIA or amaurosis fugax (hospitalization with any of the following as 1 st diagnosis)	435.0, 435.1, 435.2, 435.3, 435.8, 435.9, 362.34
Myocardial infarction hospitalization (hospitalization with any of the following as 1 st diagnosis)	410.00, 410.01, 410.02, 410.10, 410.11, 410.12, 410.20, 410.21, 410.22, 410.30, 410.31, 410.32, 410.40, 410.41, 410.41, 410.42, 410.50, 410.51, 410.52, 410.60, 410.61, 410.62, 410.70, 410.71, 410.72, 410.80, 410.81, 410.82, 410.90, 410.91, 410.92
Heart failure hospitalization (hospitalization with any of the following as primary diagnosis)	402.01; 402.11; 402.91; 404.01; 404.03; 404.11; 404.13; 404.91; 404.93, 428, 428.0, 428.1, 428.2, 428.20, 428.21, 428.22, 428.23, 428.3, 428.30, 428.31, 428.32, 428.33, 428.4, 428.40, 428.41, 428.42, 428.43, 428.9
Hypertension	401, 401.0, 401.1, 401.9, 402, 402.0, 402.00, 402.01, 402.1, 402.10, 402.11, 402.9, 402.90, 402.91, 403, 403.0, 403.00, 403.01, 403.1, 403.10, 403.11, 403.9, 403.90, 403.91, 404, 404.0, 404.00, 404.01, 404.02, 404.03, 404.1, 404.10, 404.11, 404.12, 404.13, 404.9, 404.90, 404.91, 404.92, 404.93, 405, 405.0, 405.01, 405.09, 405.1, 405.11, 405.19, 405.9, 405.91, 405.99, 437.2
Diabetes	250, 250.0, 250.00, 250.01, 250.02, 250.03, 250.1, 250.10, 250.11, 250.12, 250.13, 250.2, 250.20, 250.21, 250.22, 250.23, 250.3, 250.30, 250.31, 250.32, 250.33, 250.4, 250.40, 250.41, 250.42, 250.43, 250.5, 250.50, 250.51, 250.52, 250.53, 250.6, 250.60, 250.61, 250.62, 250.63, 250.7, 250.70, 250.71, 250.72, 250.73, 250.8, 250.80, 250.81, 250.82, 250.83, 250.9, 250.90, 250.91, 250.92, 250.93
Heart failure	402.01, 402.11, 402.91, 404.01, 404.03, 404.13, 404.91, 404.93, 428, 428.0, 428.1, 428.2, 428.20, 428.21, 428.22, 428.23, 428.3, 428.30, 428.31, 428.32, 428.33, 428.4, 428.40, 428.41, 428.42, 428.43, 428.9
Coronary Artery Disease	414, 414.0, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.2, 414.3, 414.4, 414.8, 414.9
Peripheral Vascular Disease	440.2, 440.20, 440.21, 440.22, 440.23, 440.24, 440.29, 440.4, 443.8, 443.81, 43.89, 443.9
History of hemorrhagic stroke (prior to date of AF ascertainment)	430, 431, 432, 432.1, 432.9
History of ischemic or other stroke (prior to date of AF ascertainment)	433.01, 433.11, 433.21, 433.31, 433.81, 433.91, 434.01, 434.11, 434.91, 436

History of TIA or amaurosis fugax (prior to date of AF ascertainment)	435.0, 435.1, 435.2, 435.3, 435.8, 435.9, 362.34
History of coronary artery disease or myocardial infarction	410.00, 410.01, 410.02, 410.10, 410.11, 410.12, 410.20, 410.21, 410.22, 410.30, 410.31, 410.32, 410.40, 410.41, 410.41, 410.42, 410.50, 410.51, 410.52, 410.60, 410.61, 410.62, 410.70, 410.71, 410.72, 410.80, 410.81, 410.82, 410.90, 410.91, 410.92, 412, 414.0, 414.2, 414.8, 414.9
History of heart failure	402.01; 402.11; 402.91; 404.01; 404.03; 404.11; 404.13; 404.91; 404.93, 428, 428.0, 428.1, 428.2, 428.20, 428.21, 428.22, 428.23, 428.3, 428.30, 428.31, 428.32, 428.33, 428.4, 428.40, 428.41, 428.42, 428.43, 428.9, 412, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.2, 414.3, 414.4, 414.8, 414.9

eTable 2. Incidence of Ischemic Stroke per 1000 Person-years by Residential Estimates of PM_{2.5} Quartile, Total Cohort and Stratified by Age (<75, ≥75 Years at Study Entry) and Sex

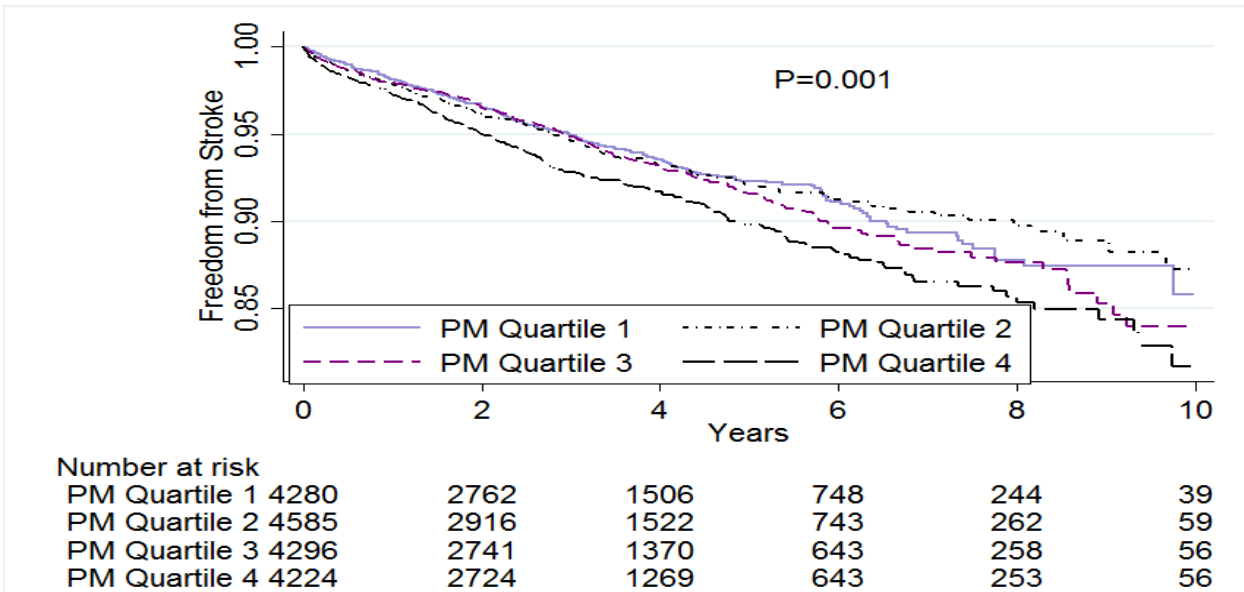
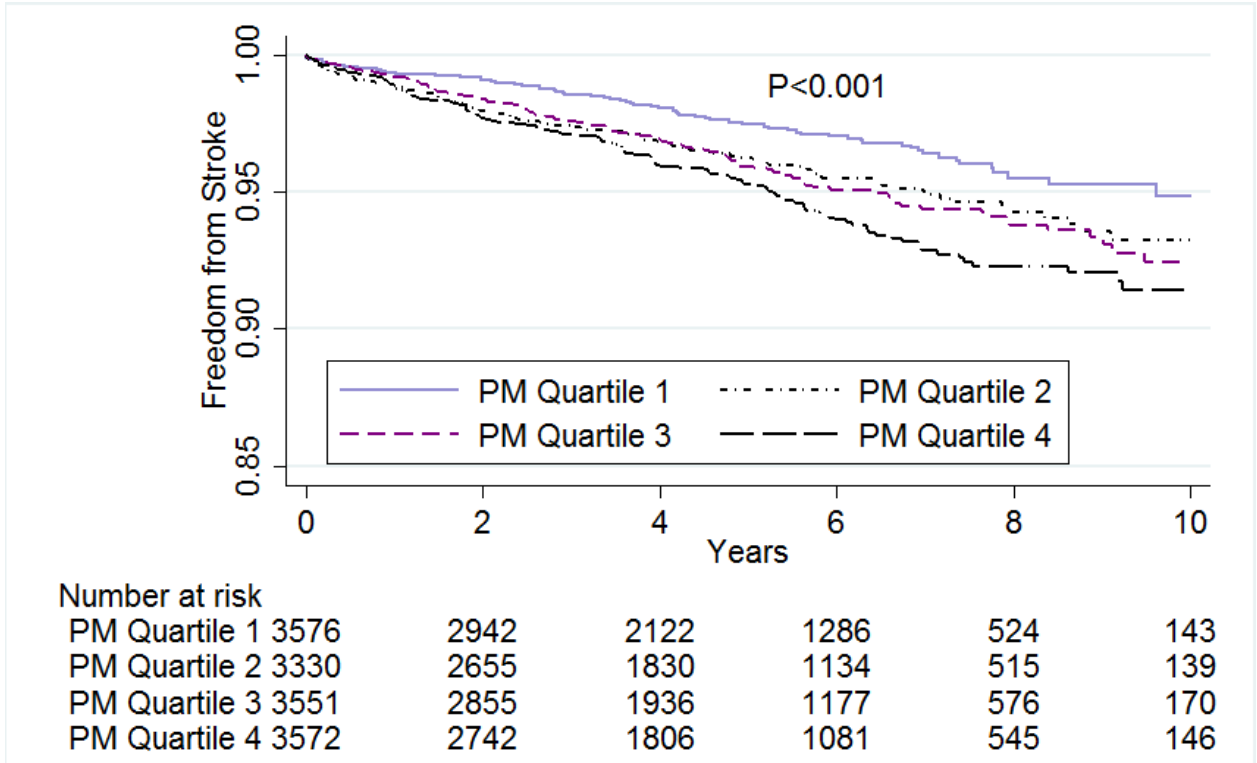
	PM _{2.5} Quartile			
Incidence*	10.30 (9.25-11.49)	12.16 (10.99-13.46)	12.51 (11.32-13.83)	15.64 (14.28-17.13)
Age				
<75	5.18 (4.22-6.37)	7.79 (6.52-9.30)	8.02 (6.77-9.50)	9.94 (8.51-11.62)
≥75	16.50 (14.53-18.74)	16.71 (14.77-18.92)	17.86 (15.78-20.22)	22.27 (19.91-22.92)
Sex				
Female	13.45 (11.65-15.52)	15.11 (13.28-17.19)	14.94 (13.14-16.99)	18.35 (16.36-20.60)
Male	7.88 (6.68-9.29)	9.22 (7.83-10.87)	10.00 (8.52-11.73)	12.54 (10.81-14.56)
*Adjusted for age and sex.				

eFigure 1. Flow Diagram Describing Participant Selection and Stepwise Exclusion From the Analysis



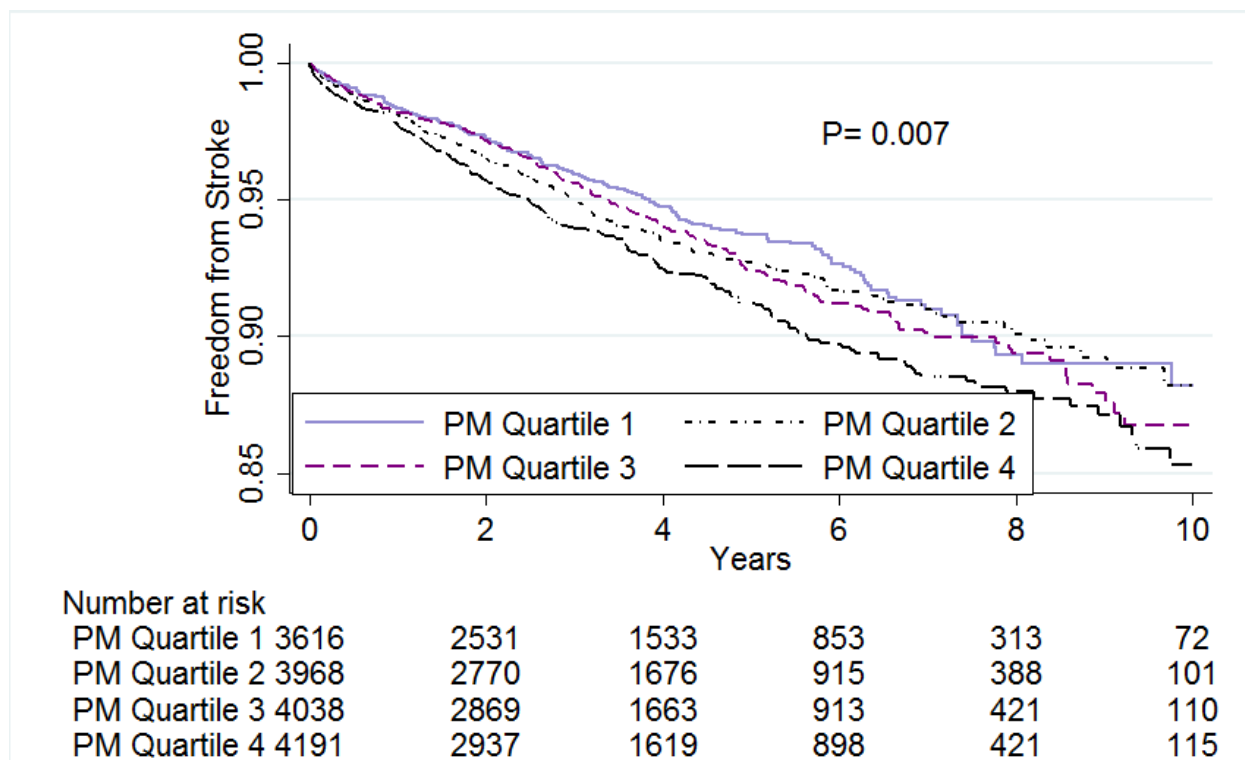
Following exclusions, there were 31,414 individuals included in the final analysis.

eFigure 2. Ischemic Stroke Events Over Time by PM_{2.5} Quartile Stratified by Age <75 (A) and Age ≥75 Years (B)

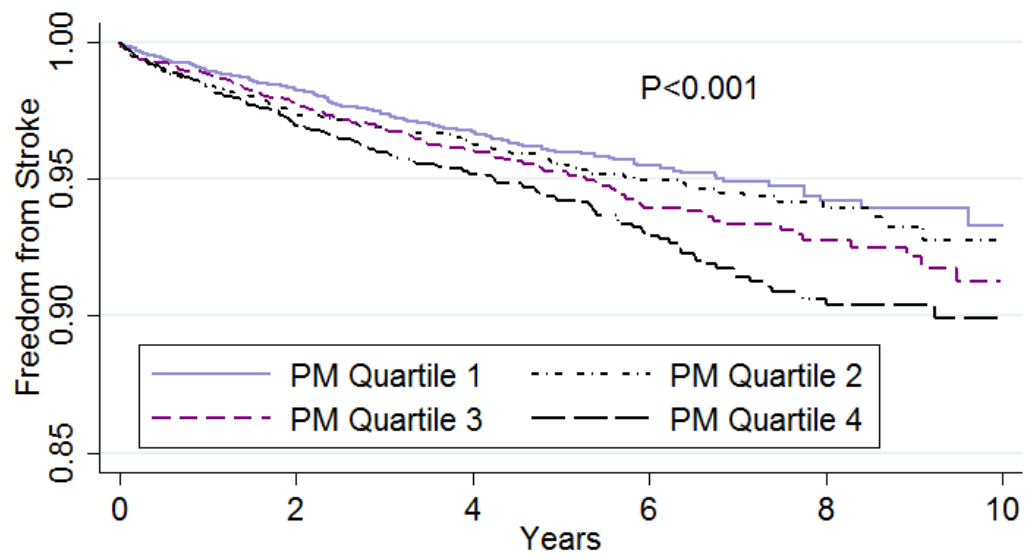


Both age-stratified analyses demonstrate the consistent association of the highest quartile of residential-level PM_{2.5} with stroke events.

eFigure 3. Ischemic Stroke Events Over Time by PM_{2.5} Quartile Stratified by Sex



The survival curves by quartile of PM_{2.5} in women (A) and men (B). While women in the cohort had greater incidence of strokes than men, the sex-stratified analyses demonstrate the consistent association of the highest quartile of residential-level PM_{2.5} with stroke events in both men and women.



Number at risk	0	2	4	6	8	10
PM Quartile 1	4240	3173	2095	1181	455	110
PM Quartile 2	3947	2801	1676	962	389	97
PM Quartile 3	3809	2727	1643	907	413	116
PM Quartile 4	3605	2529	1456	826	377	87