

Appendix 3: additional tables [posted as supplied by author]

Table A The Difference in Baseline Characteristics of the Subjects Who had not been Allocated Intervention between Two Communities.

	Intervention community	Control community	<i>P</i>
Subjects (n)	87	103	
Male	44(50.6%)	50(48.5%)	0.7803
Age (yrs)			0.7428
< 60 yrs	46(52.9%)	52(50.5%)	
≥ 60 yrs	41(47.1%)	51(49.5%)	
Education (yrs) *			0.9336
<10 yrs	54(68.4%)	71(68.9%)	
≥10 yrs	25(31.6%)	32(31.1%)	
Smoking status at baseline†			0.1873
Never smoker	59(73.8%)	59(62.8%)	
Current smoker	18(22.5%)	26(27.7%)	
Smoking cessation	3(3.8%)	9(9.6%)	
Having previous diagnosis of respiratory disorders	14(16.1%)	14(13.6%)	0.6282
Having respiratory symptoms	31(35.6%)	34(33.0%)	0.7042

* 8 subjects' data in intervention community (IC) was missing.

† 16 subjects' data was missing (7subjects in IC and 9 subjects in control community (CC)).

Table B The Adjusted Difference between Two Communities in Annual Rate of Decline in FEV₁ and FEV₁/FVC (age ≥ 40 yrs)

	Intervention community		Control community		Difference between two communities with adjustment*	
	n	Mean(SE)	n	Mean(SE)	Mean(95% CI)	P
Healthy population						
FEV ₁ (ml/yr)	103	17 (4)	91	42 (5)	5(29 to 39)	0.7612
FEV ₁ (pred%/yr)	103	-0.4(0.2)	91	0.9(0.2)	0.1(-1.6 to1.9)	0.8795
FEV ₁ /FVC(%/yr)	103	-0.7(0.2)	91	0.2(0.2)	0.4(-0.8 to 1.7)	0.4879
High-risk population						
FEV ₁ (ml/yr)	279	29 (4)	288	52 (4)	22(1to 42)	0.0375
FEV ₁ (pred%/yr)	279	0.2(0.2)	288	1.3(0.2)	1.3(0.2 to 2.4)	0.0206
FEV ₁ /FVC(%/yr)	279	-0.4(0.1)	288	0.5(0.1)	0.7(0.1 to 1.4)	0.0344
COPD population						
FEV ₁ (ml/yr)	47	62 (13)	52	47 (13)	7(-61 to76)	0.8369
FEV ₁ (pred%/yr)	47	2.4 (0.7)	52	1.5 (0.7)	0.0(-3.3 to 3.3)	0.9874
FEV ₁ /FVC(%/yr)	47	-0.6 (0.4)	52	0.2 (0.4)	0.5(-1.6 to2.6)	0.6415

* Difference after adjustment for confounding (i.e. baseline FEV₁ (or FEV₁/FVC), age, gender, education, smoking status, COPD, body mass index, and occupational exposure to dust/gases/fumes) and clustering effects.

Table C Annual Rate of Decline in FEV₁ (ml/yr, pred%/yr) and FEV₁/FVC (%/yr) in Subjects (age ≥ 40 yrs) with Various Smoking Status by Communities Stratum

	Never smokers		Smoking cessation		Current smokers		Difference of FEV ₁ between Various Smoking Status					
	n	M (SE) [*]	n	M (SE) [*]	n	M (SE) [†]	Current vs. Never		Current vs. Cessation		Cessation vs. Never	
							M (95% CI) [‡]	P [‡]	M(95% CI) [‡]	P [‡]	M(95% CI) [‡]	P [‡]
Intervention community												
FEV ₁ (ml/yr)	239	14(4)	96	38(7)	94	66(7)	51(35to67)	<0.0001	27(8to46)	0.0008	24(9to40)	0.1852
FEV ₁ (pred%/yr)	239	-0.5(0.2)	96	0.7(0.3)	94	2.0(0.3)	2.5(1.7to3.3)	<0.0001	1.3(0.3to2)	0.0054	1.3(0.5to2.0)	0.0241
FEV ₁ /FVC (%/yr)	239	0.7 (0.1)	96	0.6 (0.2)	94	0.1 (0.2)	0.6 (0.1to1.2)	0.3577	0.5 (-0.2to1.1)	0.0912	0.1 (-0.4to0.7)	0.4927
Control community												
FEV ₁ (ml/yr)	232	40(5)	72	55(8)	127	63(6)	23(7to38)	0.5132	7(-13to28)	0.4649	15(-4to34)	0.9386
FEV ₁ (pred%/yr)	232	0.9(0.2)	72	1.5(0.4)	127	1.5(0.3)	0.6(-0.2to1.4)	0.7011	0.0(-1.0to1.1)	0.9973	0.6(-0.4to1.6)	0.7323
FEV ₁ /FVC (%/yr)	232	0.3 (0.1)	72	0.2 (0.3)	127	0.6 (0.2)	0.3 (-0.2to0.8)	0.7540	0.4 (-0.3to1.1)	0.3923	-0.1 (-0.7to0.5)	0.6189

* Unadjusted mean (SE) of the rate of FEV₁ and FEV₁/FVC decline.

† Unadjusted difference (95% CI) between various smoking statuses in the rate of FEV₁ and FEV₁/FVC decline was given.

‡ P values of comparison of difference between various smoking statuses in the rate of FEV₁ and FEV₁/FVC decline were given after adjustment for confounders (i.e. baseline FEV₁(or FEV₁/FVC), age, gender, education, COPD, BMI, and occupational exposure to dust/gases/fumes, and change of environmental tobacco smoke) and clustering effects.

Table D Adjusted Annual Rate of Decline in FEV₁ (ml/yr, pred%/yr) and FEV₁/FVC (%/yr) in Nonsmokers (age ≥ 40 yrs)

	Two Communities						Environmental Tobacco Smoke					
	IC		CC		Difference (CC VS. IC)		Improvement (No)		Improvement (Yes)		Difference (No vs Yes)	
	n	M(SE) [†]	n	M(SE) [†]	M(95%CI) [†]	P [‡]	n	M(SE) [†]	n	M(SE) [†]	M(95%CI) [†]	P [§]
FEV ₁ (ml/yr)	312	19(4)	295	42(4)	23(12to33)	0.0445	264	35(4)	343	26(4)	9(-2to19)	0.0759
FEV ₁ (pred%/yr)	312	-0.3(0.2)	295	1.0(0.2)	1.2(0.7to1.8)	0.0387	264	0.7(0.2)	343	0.1(0.2)	0.6(0.0to1.2)	0.0440
FEV ₁ /FVC(%/yr)	312	-0.8 (0.1)	295	0.3 (0.1)	1.0(0.7to1.4)	0.0345	264	0.2 (0.1)	343	0.4 (0.1)	0.2(-0.1to0.6)	0.0645

IC: intervention community, CC: control community.

* Unadjusted mean (SE) of decline in FEV₁.

† Unadjusted difference (95% CI) in the rate of FEV₁ decline was given.

‡ P values of comparison of difference in the rate of FEV₁ and FEV₁/FVC decline were given after adjustment for confounders (i.e. baseline FEV₁ (or FEV₁/FVC), age, gender, education, COPD, BMI, occupational exposure to dust/gases/fumes, and change of environmental tobacco smoke) and clustering effects.

§ P values of comparison of difference in the rate of FEV₁ and FEV₁/FVC decline were given after adjustment for confounders (i.e. baseline FEV₁ (or FEV₁/FVC), age, gender, education, COPD, BMI, communities and occupational exposure to dust/gases/fumes) and clustering effects.

Table E Correlation of Mean Air-Pollution Levels (log-transformed) during the Period from Baseline to the Spirometry Testing and Adjusted mean of FEV₁ at Each Year Across the Two Communities*.

	SO ₂	NO ₂	Dusty disposition	Sulphation rate	Factor score [‡]
Total population					
FEV ₁ (ml) [†]	-0.741(0.0353)	0.163(0.7004)	-0.870(0.0050)	-0.610(0.1086)	-0.772(0.0247)
FEV ₁ (pred) [†]	-0.732(0.0391)	0.121(0.7750)	-0.850(0.0075)	-0.567(0.1425)	-0.751(0.0316)
FEV ₁ /FVC (%) [†]	-0.902 (0.0020)	0.075 (0.8600)	-0.868 (0.0050)	-0.604 (0.1130)	-0.832 (0.0100)
Non COPD					
FEV ₁ (ml) [†]	-0.757(0.0297)	0.229(0.5846)	-0.886(0.0034)	-0.634(0.0911)	-0.778(0.0231)
FEV ₁ (pred) [†]	-0.79(0.0197)	0.189(0.6540)	-0.891(0.0030)	-0.62(0.1013)	-0.791(0.0195)
FEV ₁ /FVC (%) [†]	-0.858 (0.0060)	0.191 (0.6510)	-0.767 (0.0260)	-0.553 (0.1550)	-0.728 (0.0400)
Never smokers					
FEV ₁ (ml) [†]	-0.764(0.0273)	0.265(0.5259)	-0.883(0.0036)	-0.651(0.0804)	-0.778(0.0230)
FEV ₁ (pred) [†]	-0.727(0.0412)	0.298(0.4734)	-0.82(0.0127)	-0.592(0.1223)	-0.706(0.0500)
FEV ₁ /FVC (%) [†]	-0.473 (0.0060)	0.022 (0.7250)	-0.684 (<0.0001)	-0.402 (0.0020)	-0.567 (0.143)

* Data were given as **R (P)**. All data of air pollutants were analysis based on log-transformed values.

† adjusted mean of FEV₁ and FEV₁/FVC for confounders (i.e. baseline FEV₁ (or FEV₁/FVC), age, gender, education, COPD, BMI, occupational exposure to dust/gases/fumes, change of smoking status and change of environmental tobacco smoke) and clustering effects.

‡ Factor score that represented for total air pollution are extracted from level of SO₂ NO₂ Dusty disposition and Sulphation rate using factor analysis.

Table F The Adjusted Rate of Decline in FEV₁ (ml/yr, pred%/yr) and FEV₁/FVC (%/yr) by Various Confounders*

Variable	Subjects (n)	FEV ₁ (ml)		FEV ₁ (% pred.)		FEV ₁ /FVC (%)	
		Difference	P	Difference	P	Difference	P
sex							
Male	392	19 (9 to 30)	0.0004	0.4(-0.2to1.0)	0.1519	0.4(0.1to0.8)	0.0190
Female	468	0 (Reference)		0 (Reference)		0 (Reference)	
COPD at baseline							
Yes	99	10(-2 to 22)	0.1176	0.8(0.2to 1.5)	0.0112	-0.2(-0.6to 0.2)	0.3804
No	761	0 (Reference)		0 (Reference)		0 (Reference)	
Age groups at baseline							
40-49yr	203	8(-4to 21)	0.2022	0.0(-0.7to 0.7)	0.9859	0.1(-0.3to 0.5)	0.5570
50-59yr	186	-1(-13 to 10)	0.8200	-0.3(-0.9 to 0.3)	0.3257	-0.1(-0.5to 0.3)	0.7102
60-69yr	209	-1 (-11 to 9)	0.8442	-0.4(-0.0to 0.2)	0.1960	-0.2(-0.5to 0.2)	0.3818
70+yr	202	0 (Reference)		0 (Reference)		0 (Reference)	
Occupational exposure to dusty at baseline							
No	463	-4(-11 to 4)	0.3535	0.0(-0.4to 0.4)	0.8576	0.0(-0.2to 0.3)	0.9462
Yes	397	0 (Reference)		0 (Reference)		0 (Reference)	
Environmental tobacco smoke at baseline							
Yes	617	3(-6 to 11)	0.5263	0.1(-0.3to 0.6)	0.5316	0.1(-0.2to 0.3)	0.6647
No	243	0 (Reference)		0 (Reference)		0 (Reference)	
BMI at baseline (kg/m2)							
≥ 18.5	778	-4(-17 to 9)	0.5241	-0.3(-1.0to 0.4)	0.4041	-0.3(-0.7to 0.2)	0.2315
<18.5	72	0 (Reference)		0 (Reference)		0 (Reference)	
Education years at baseline							
< 6 yr	389	4 (-6 to 14)	0.4306	0.2(-0.4to 0.7)	0.4937	-0.2(-0.5to 0.2)	0.3346
6-12 yr	215	2(-8 to 13)	0.6410	0.1(-0.4to 0.6)	0.7103	0.0(-0.4to 0.3)	0.8666
12+yr	256	0 (Reference)		0 (Reference)		0 (Reference)	
Smoking status at baseline							
No-smoking	471	-21(-33 to -10)	0.0003	-1.0(-1.6to -0.4)	0.0007	-0.2(-0.6to 0.2)	0.2935
Formal smoking	136	-20 (-329 to -9)	0.0007	-0.8(-1.4to -0.2)	0.0137	-0.6(-1.0 to -0.2)	0.0040
Current smoking	253	0 (Reference)		0 (Reference)		0 (Reference)	

* all difference and P values was adjustment for clustering and confounding factors (i.e. baseline FEV₁(FEV₁/FVC), communities, age, gender, education, smoking status, environmental tobacco smoke, COPD, BMI, and occupational exposure to dust/gases/fumes).