

# Supplementary Materials: Prevalence distribution of Chronic Obstructive Pulmonary Disease (COPD) in the city of Osorno (Chile), in 2018, and its association with fine particulate matter PM<sub>2.5</sub> air pollution.

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**Table S1.** Sociodemographic characteristics of users with COPD in the city of Osorno in 2018, according to the Primary Health Care Centers (PHCCs) administration area. PHCCs: ML, Marcelo Lopetegui; OV, Ovejería; PA; Pampa Alegre; RA, Rahue Alto; PJ, Pedro Jauregui; QC, Quinto Centenario. Values in parentheses show the number of COPD patients living in that area. Freq., absolute frequency.

VARIABLE	ML (184)		OV (43)		PA (144)		RA (292)		PJ (83)		QC (63)	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
<b>GENDER</b>												
Female	105	57.1	24	55.8	77	53.5	162	55.5	49	59.0	29	46.0
Male	79	42.9	19	44.2	67	46.5	130	44.5	34	41.0	34	54.0
<b>AGE (years old)</b>												
40 – 49	1	0.5	0	0	1	0.7	11	3.8	3	3.6	2	3.2
50 – 59	15	8.2	4	9.3	21	14.6	47	16.1	3	3.6	7	11.1
60 – 69	38	20.7	14	32.6	40	27.8	86	29.5	27	32.5	18	28.6
70 – 79	83	45.1	18	41.9	42	29.2	78	26.7	35	42.2	22	34.9
80 and older	47	25.5	7	16.3	40	27.8	70	24.0	15	18.1	14	22.2
<b>EDUCATIONAL LEVEL<sup>1</sup></b>												
Without educational teaching	4	2.7	0	0	7	12.5	18	13.7	0	0	5	11.1
Incomplete primary education	41	28.1	6	35.3	19	33.9	81	61.8	10	52.6	31	68.9
Complete primary education	34	23.3	3	17.6	12	21.4	15	11.5	0	0	7	15.6
Incomplete secondary education	16	11.0	4	23.5	7	12.5	7	5.3	3	15.8	2	4.4
Complete secondary education	37	25.3	4	23.5	8	14.3	7	5.3	5	26.3	0	0

Incomplete higher education	3	2.1	0	0	0	0	1	1.5	0	0	0	0
Complete higher education	11	7.5	0	0	3	5.4	2	0.8	1	5.3	0	0
Not informed	38		26		88		161		64		18	
<b>ETHNICITY</b>												
Mapuche	1	0.5	0	0	2	1.4	29	9.9	4	4.8	0	0
None	173	99.5	43	100	142	98.6	263	90.1	79	95.2	63	100
<b>NATIONALITY</b>												
Chilean	182	98.9	43	100	144	100	292	100	83	100	63	100
Foreigner	2	1.1	0	0	0	0	0	0	0	0	0	0

<sup>1</sup> Educational level is expressed with respect to the users who reported that variable (n = 416).

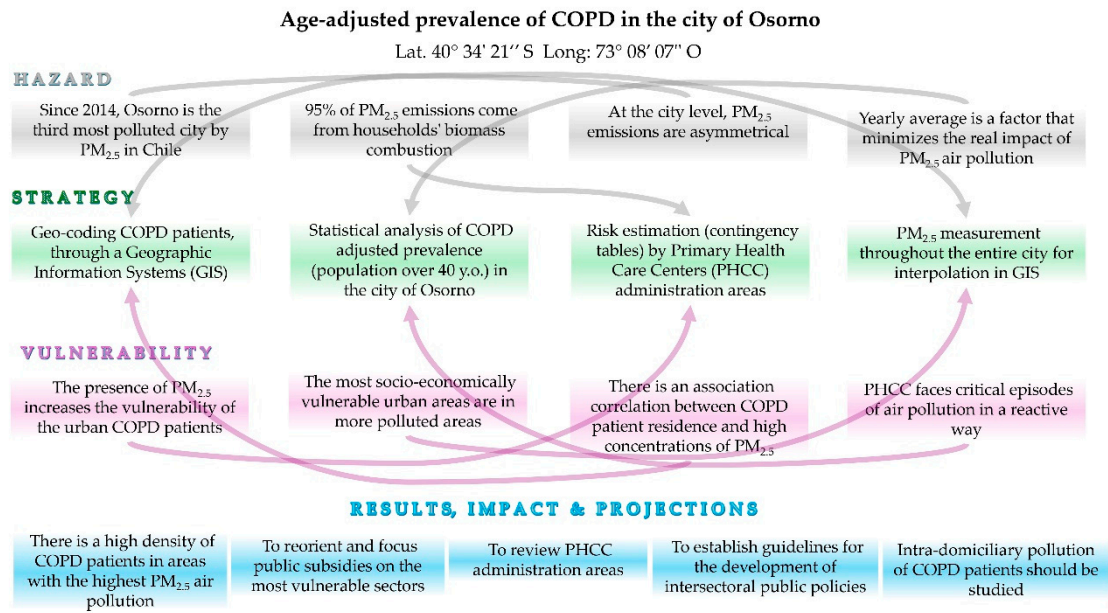
**Table S2.** Corrected prevalence of COPD in the city of Osorno. The age-adjusted observed prevalence was corrected by the underdiagnosis rate of 89% [10]. UOS, urban area from Osorno; PHCC, Primary Health Care Center; ML, Marcelo Lopetegui; OV, Ovejería; PA; Pampa Alegre; RA, Rahue Alto; PJ, Pedro Jauregui; QC, Quinto Centenario.

Area	TOTAL					FEMALES					MALES				
	Population over 40 years old	Observed frequency	Age-adjusted prevalence (%)	Expected frequency	Corrected prevalence (%)	Population over 40 years old	Observed frequency	Age-adjusted prevalence (%)	Expected frequency	Corrected prevalence (%)	Population over 40 years old	Observed frequency	Age-adjusted prevalence (%)	Expected frequency	Corrected prevalence (%)
UOS	62,839	809	1.3	7,355	11.7	34,764	446	1.3	4,055	11.7	28,075	363	1.3	3,300	11.8
PHCC-ML	20,144	184	0.9	1,673	8.3	11,238	105	0.9	955	8.5	8,906	79	0.9	718	8.1
PHCC-OV	4,063	43	1.1	391	9.6	2,228	24	1.1	218	9.8	1,835	19	1.0	173	9.4
PHCC-PA	8,094	144	1.8	1,309	16.2	4,537	77	1.7	700	15.4	3,557	67	1.9	609	17.1
PHCC-RA	11,662	292	2.5	2,655	22.8	6,302	162	2.6	1,473	23.4	5,320	130	2.4	1,182	22.2

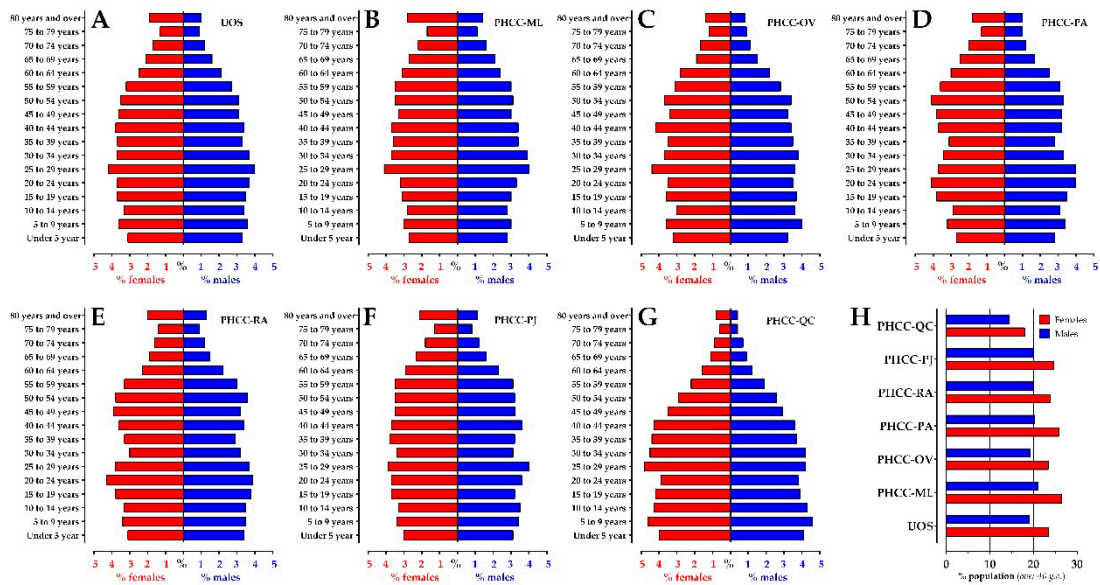
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PHCC-PJ	7,561	83	1.1	755	<b>10.0</b>	4,170	49	1.2	445	<b>10.7</b>	3,391	34	1.0	309	<b>9.1</b>
PHCC-QC	11,355	63	0.6	573	<b>5.0</b>	6,289	29	0.5	264	<b>4.2</b>	5,066	34	0.7	309	<b>6.1</b>

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**Figure S1.** Research workflow and results, impact, and projections summary.



**Figure S2.** Population structure and composition in the city of Osorno and in each of the six Primary Health Care Centers (PHCC) territories that compose it. (A) UOS, urban area from Osorno; PHCCs: (B) ML, Marcelo Lopezetegui; (C) OV, Ovejería; (D) PA, Pampa Alegre; (E) RA, Rahue Alto; (F) PJ, Pedro Jáuregui; (G) QC, Quinto Centenario. Values are % of the urban population (females, red; males, blue), according to age range. (H) females and males' population older than 40 years old (y.o.) by area, expressed as a percentage of total inhabitants of each gender.