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Temporal trends of lung cancer, other cancers and COPD hospitalizations in Mexicans age ≥40 years, 2000-2014

Dear editor: There is a favorable decreasing trend of the age-standardized mortality rates among Mexicans with lung cancer (LC)¹ and males with chronic obstructive pulmonary disease (COPD).² Hospital discharge

rates (HDR per 1 000 total hospital discharges) trends represent another indicator of changes in LC and COPD incidence. Using joinpoint regression, this countrywide study determined HDR trends of LC and COPD in Mexicans age ≥40 years. HDR trends of other cancers (OC) and other diseases were calculated for comparison. From 2000 to 2014 the LC-HDR decreased in the whole sample (WS) and in males (annual percent change or APC= -2.3 and -3.6 respectively, $p<0.05$) but not in females, APC=-0.2, $p=0.82$. COPD-HDR³ APC decreased by -2.2, -2.9, -1.6 for the WS-males-females respectively while OC-HDR³ APC increased 3.4, 2.5 and 3.9 respectively, $p<0.05$ (table I).³

In 2007-2008 the Seguro Popular de Salud through the program Fondo

de Protección Contra Gastos Catastóficos increased funding for cancer⁴ which may explain the OC-HDR increase seen from 2008 to 2014 (figure 1) in WS-males-females (APC of 8.7, 5.9, and 10.0 respectively, $p<0.05$, data not shown).

In conclusion, LC-hospitalizations decreased in males by 2.3% annually from 2000 to 2014 while COPD hospitalizations decreased at a higher rate in males (APC -2.9) than females (APC -1.6). The main contributors for this favorable trend are likely the reduction of smoking prevalence overtime (estimated 26.2% in 1998-2002 and 21.7% in 2011)⁵ and the cigarette taxes and anti-smoking laws implemented in 2007 and 2008.

The lack of statistically significant reduction in female's COPD

Table I
HOSPITAL DISCHARGE RATES AND TOTAL NUMBER OF DISCHARGES BY YEAR, GENDER AND BY FINAL DIAGNOSIS AT DISCHARGE AMONG HOSPITALIZED MEXICANS AGE ≥40 YEARS

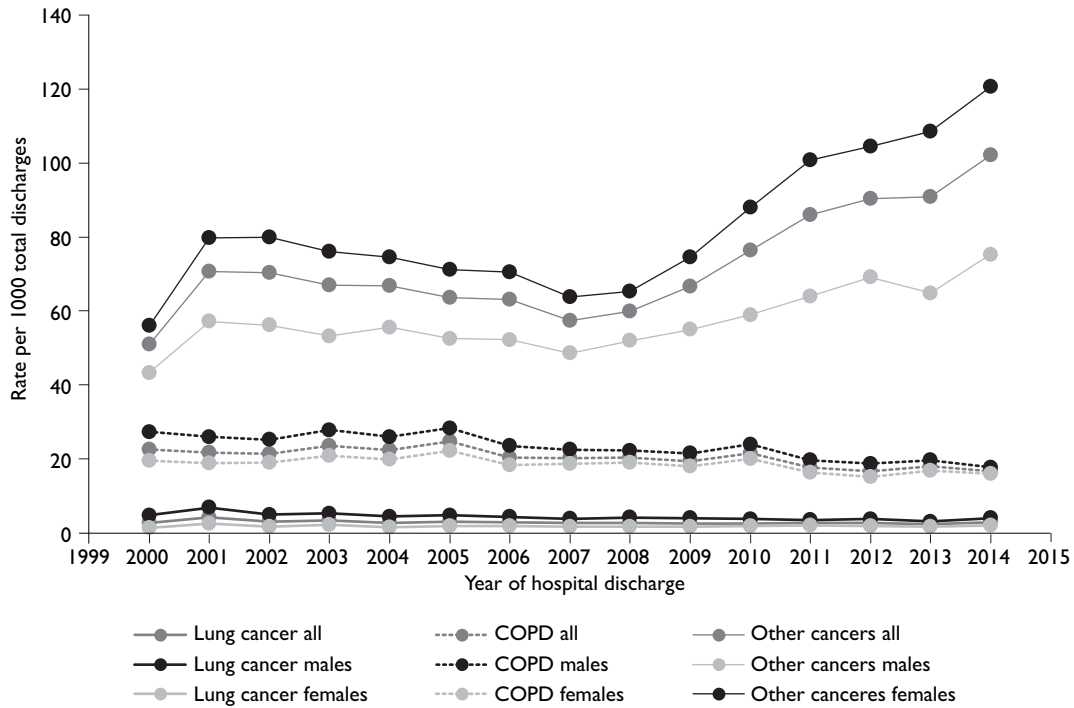
Ministry of Health (Secretaría de Salud) Hospitals only, Mexico, 2000-2014*

Year	Both sexes					Males					Females				
	Lung Cancer	COPD	Other cancers	Other diseases	Total N=	Lung Cancer	COPD	Other cancers	Other diseases	Total N=	Lung Cancer	COPD	Other cancers	Other diseases	Total N=
	HDR					HDR					HDR				
2000	2.8	22.7	51.1	923.5	229 266	4.8	27.3	43.3	924.5	90 658	1.4	19.6	56.1	922.8	138 608
2001	4.3	21.7	70.7	903.3	265 657	6.9	26.0	57.2	909.9	106 114	2.6	18.8	79.8	898.8	159 543
2002	3.1	21.5	70.3	905.1	284 665	4.9	25.2	56.1	913.7	114 392	1.8	19.0	79.9	899.3	170 273
2003	3.5	23.7	67.0	905.9	305 926	5.3	27.8	53.2	913.6	121 947	2.2	20.9	76.1	900.8	183 979
2004	2.8	22.4	66.8	908.0	326 666	4.5	26.0	55.6	914.0	131 692	1.6	19.9	74.5	904.0	194 974
2005	3.1	24.7	63.7	908.6	360 704	4.8	28.3	52.6	914.3	145 107	1.9	22.3	71.1	904.7	215 597
2006	2.9	20.4	63.1	913.6	393 858	4.4	23.6	52.2	919.9	158 782	2.0	18.3	70.4	909.3	235 076
2007	2.7	20.3	57.5	919.6	440 767	3.9	22.5	48.6	925.1	181 816	1.8	18.7	63.7	915.8	258 951
2008	2.7	20.4	59.9	917.0	459 508	4.2	22.3	52.0	921.4	188 015	1.7	19.0	65.4	914.0	271 493
2009	2.6	19.4	66.6	911.4	473 625	4.0	21.5	55.0	919.5	191 975	1.7	18.0	74.6	905.8	281 650
2010	2.6	21.6	76.3	899.4	492 316	3.8	23.9	58.9	913.3	197 773	1.8	20.1	88.0	890.1	294 543
2011	2.7	17.7	86.1	893.6	537 905	3.6	19.7	64.0	912.7	215 858	2.1	16.3	100.8	880.8	322 047
2012	2.7	16.7	90.3	890.4	577 843	3.8	18.8	69.2	908.3	231 407	1.9	15.2	104.5	878.4	346 436
2013	2.3	18.0	90.8	888.9	580 100	3.1	19.7	64.8	912.4	234 251	1.8	16.8	108.5	872.9	345 849
2014	2.9	16.7	102.1	878.3	619 682	4.0	17.7	75.2	903.0	252 402	2.1	15.9	120.6	861.4	367 280
Total	2.8	19.9	75.2	902.1	6 348 488	4.2	22.5	58.9	914.4	2 562 189	1.9	18.2	86.1	893.8	3 786 299
2000-2014 APC ‡	-2.3 [^]	-2.2 [^]	3.4 [^]	-0.2 [^]		-3.6 [^]	-2.9 [^]	2.5 [^]	-0.06		-0.2	-1.6 [^]	3.9 [^]	-0.3	

* Excludes external causes of hospitalization (ICD-10 starting with letters S to Z) or in-hospital deaths. HDR hospital discharge rate per 1000/ total hospital discharges.

‡ Annual percent change by joinpoint regression analysis, [^] $p<0.05$

Source: Dirección General de Información en Salud³



Source: Source: Dirección General de Información en Salud³

FIGURE 1. LUNG CANCER, CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) AND OTHER CANCERS RATES PER 1000 TOTAL DISCHARGES IN ALL PATIENTS AND BY GENDER. MEXICANS AGE ≥40 YEARS ONLY, 2000-2014

mortality² and of LC hospitalizations found in this study indicate that factors other than smoking are playing a role. The prevalence of biomass smoke (BS) exposure resulting from cooking remains high in rural Mexico (45%)⁶ where females are usually in charge of cooking and therefore more exposed to BS and have also a higher risk of lung cancer.⁷ Future studies should be focused on factors including genetic susceptibility or the degree of exposure to BS/occupational agents.

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Diseño de un cuestionario de actitudes hacia el aborto inducido

Señor editor: El aborto inducido o voluntario es un tema controversial que involucra aspectos de derechos