**"Evaluation of the impact of the GES policies on in-hospital mortality and lethality and its association with the social and economic level in hospital outbreaks of lung cancer years in Chile 2001-2017"**

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## Overview

Lung cancer is the second cause of global mortality in Chile, after gastric cancers. In 2017, 2,483 people with a diagnosis of lung cancer died in Chile, which constitutes a mortality rate of 13.8 per 100,000 inhabitants and was 2.6% of the causes of general mortality (1). At present, lung cancer is not included in the Explicit Health Guarantees plan, given that the rationing criteria in sanitary matters established by the AUGE Plan in Chile are mainly based on efficiency maxims that are contrary to the principles of equity that should support the health policies of democratic societies (2). Therefore, the treatment against lung cancer should be provided according to specific conditions of each health center and patient, proposing as a solution to increase the number of specialized centers by 30.4% (7 highly complex centers), added to a increase of one of health reference centers for outpatient care (24.3% care) and an increase in staffing by 50%, considering that their resources are limited and heterogeneous. Because it is a pathology with very high mortality and with an access to treatment mediated by the health forecast that is available, it is that the economic income (6,8) and the opportunity of access to treatment (4) are decisive for an adequate diagnosis, a better treatment and an accurate resolution of the pathology.

## ***Metodology***

Study in 27.103 hospital outcomes during 2001 and 2017 for lung cancer, analytical, cross-sectional and cohort, obtained from the departmental hospital base DEIS, January 2019.
A univariate statistical analysis was carried out in order to evaluate the study population, constituted by hospital expenditures for lung cancer in Chile, 2014 using the Excel.2013 software, in order to see the type of distribution of ages, sex and forecast. applying Smirnov-kolmogorov and Poisson distribution tests to evaluate the distribution of days of hospitalization and ages. Subsequently, the data were grouped according to the forecast in two large groups: public (FONASA = 1) and private (ISAPRE, DIPRECA and CAPREDENA = 2) in order to be able to evaluate the statistically significant differences between both groups using the contrast test of Fisher's exact test hypothesis to evaluate both groups, subsequently applying binary logistic regression model calculating the OR'S for both groups according to age, sex, healthcare, surgery and days of hospital stay. It was considered statistically significant $p < 0.05$.
The mortalities will be described by rates and proportions and the days of stay and ages were combined according to their means and medians with their standard deviation
Statistical hypothesis:
H0 = There are no statistically significant differences between lethalities and specific mortalities in relation to their ORs between the public and private systems.
H1>H0=> There are more lethalities and specific mortalities in relation to their ORs between the public and private systems.
H<H0=> There are minor differences between lethalities and specific mortalities in relation to their ORs between the public and private systems
GENERAL AND SPECIFIC OBJECTIVES
1. Describe the hospital discharge according to age, sex, forecast and days in lung cancer (C340-C349).
2. Characterize global and specific lethality according to age, sex and forecast in each of the pathologies ***Specific objectives:***
Describe the proportion of deaths in hospital discharge lung cancer (C340-C349) diagnosed years 2001 and 2017.

To compare the proportion of deaths in hospital discharges with the forecast of them and their intrahospital lethality, comparing them with infant mortality, projecting the ORs according to public and private system of surgeries and chemotherapy and radiotherapy treatments considering p <0.05.
It was observed that 40% of expenditures are women and 60% are men who were distributed according to the in 55.66% corresponded to the public sector and 44.34% to the private sector constituted by 33% ISAPRE, 2% DIPRECA and 1% CAPREDENA. Statistically significant differences were found in the condition of discharge with respect to the Health ensurency, with a mortality rate of 19% in the public sector versus 7% in the private sector with p <0.05 when performing Fisher's exact test. The odd'ratios of Sex OR=(0,806 major than female v/s male)IC=0,75-0,866p<0,0001; Age OR'S= (1,026 per year )IC=1,023-1,029; Prevision OR'S (FONASA=2,539 IC =1,107-5,503 than private system ISAPRE OR'S=0,601 IC= 0,369-0,976; p<0,04, DIPRECA=0,366 IC=0,169-0,790 p<0,001, CAPREDENA=O,437 IC=0,254-0,751p<0,003) and Socioeconomycal Status OR`S (0,877minor than NSE =5 v/s NSE=1IC=0,849-); . confirmed our research hypothesis.

Conclussion: There are statistical differences between the condition of exit with respect to both public and private forecast, with a lower proportion of mortality with respect to the public group.It would be interesting to study the association between the educational level, the socioeconomic level and the comparative development index to evaluate in the future the coverage for this type of cancer versus those that are included in GES such as breast and prostate cancer where coverage and Access is guaranteed.

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