Hospital admissions/mortality ratio: a composite health indicator for monitoring NCD

Rodrigo Sarmiento-Suárez

M Ortiz-Pinto[1], B Pérez-Gómez[2], I Galán[2], R Sarmiento-Suárez[1], T Gómez-García[1], P Fernández-Navarro[2], A Padrón-Monedero[2], I Noguer[1]

[1]National School of Public Health, Carlos III Institute of Health (ISCIII), Madrid, Spain
[2]National Center for Epidemiology, Carlos III Institute of Health (ISCIII), Madrid, Spain
Contact: r.sarmiento@isciii.es

Background:
Our aim was to test the usefulness of a new tool to monitor NCD. We evaluated a composite indicator, the ratio of hospitalizations vs mortality rates (HMR), by assessing its capacity of identifying additional variability among regions. In this communication, we present the analysis corresponding to ischemic heart disease as an example.

Methods:
We used the Hospital Morbidity Survey and the Death Statistics for Spain in 2016, both provided by the National Institute of Statistics, to calculate age-adjusted hospitalisation and mortality rates for ischemic heart disease for men and women in all 52 provinces of Spain. Subsequently, we computed HMR, the ratio of the age-adjusted of hospital morbidity and mortality rates. The correlation and linear adjustment between provincial mortality and morbidity rates, as well as mortality and HMR, were also estimated by sex.

Results:
The rate of hospital admissions for ischemic heart disease in Spain was 407 per 100,000 in men and 129.4 in women. The mortality rate was 93.1 per 100,000 in men and 40.3 in women. In both sexes, the highest morbidity and mortality rates were observed in the south of Spain. Pearson correlation between morbidity and mortality rates were 0.53 ($p < 0.01$) in men and 0.75 ($p < 0.05$) in women. HMR showed a different spatial pattern with important variability. In men the average ratio was 4.3, with a range of 2.8 (Tenerife) to 7.1 (Melilla); in women the average was 3.2 with a range between1.7 (Zamora and Tenerife) and 4.7 (Barcelona), and in both sexes very high ratios were found in Catalonia's provinces. Association between mortality rate and HMR showed a negative correlation in both men (-0.39; $p < 0.01$) and women (-0.24; $p < 0.05$).

Conclusions:
HMR is a composite indicator that provides complementary information regarding the individual analysis of hospital morbidity and mortality rates. HMR of ischemic heart disease shows an important geographical variability and an inverse association with mortality.

Downloaded from https://academic.oup.com/eurpub/article/30/Supplement_5/ckaa165.268/5914852 by guest on 09 April 2024