Influenza burden estimates in Portugal: seasons 2013/14 to 2018/19

Ana Torres

AR Torres[1], I Kislaya[2,1], S Silva[1], V Gomez[1], A Machado[2,1], B Nunes[2,1], R Guiomar[3], AP Rodrigues[1]
[1]Department of Epidemiology, National Health Institute Dr. Ricardo Jorge, Lisbon, Portugal
[2]Centro de Investigação em Saúde Pública, Escola Nacional de Saúde Pública, Universidade NOVA de Lisboa, Lisbon, Portugal
[3]Department of Infectious Diseases, National Health Institute Dr. Ricardo Jorge, Lisbon, Portugal
Contact: a.rita.torres@insa.min-saude.pt

Background:
Reliable influenza burden estimates are essential for a true understanding of the influenza epidemics' impact; informed decision-making and effective risk communication. This study aimed to estimate the influenza burden in Portugal in 2013/14 - 2018/19 seasons.
Methods:
We estimated seasonal influenza burden, ranging from medically attended influenza cases in primary care to influenza-attributable deaths, using surveillance data. Data were collected for influenza like illness (ILI) epidemic periods, determined by the Moving Epidemic Method. Medically attended influenza cases were estimated by multiplying the number of ILI cases in primary care by the percentage of influenza-positive samples. Hospitalized severe acute respiratory infections (SARI) positive for influenza estimates were computed, multiplying the number of SARI by the percentage of influenza-positive samples. To determine influenza-attributable deaths, a Poisson regression model was used.
Results:
The median number of medically attended influenza cases in primary care was 33,668 (325.8 cases per 10,000 population), ranging between 21,393 in 2017/18, [Influenza B and A(H1) co-dominance] and 61,768 in 2014/15 [Influenza B and A(H3) co-dominance]. The median number of SARI positive for influenza was 8,724 (84.4 cases per 10,000 population), ranging between 7,099 in 2013/14 [A(H1) and A(H3) co-dominance], and 9,125 in 2014/15. The median number of influenza-attributable deaths was 3,311 (32.0 cases per 10,000 population), ranging between 96 in 2015/16 [A(H1) dominance], and 5,224 in 2014/15.
Conclusions:
Higher mortality, and higher rate of medically attended influenza cases, were found in seasons with A(H3) circulation. Little variability was observed in the number of influenza-positive SARI. The relationship between the number of SARI and the number of deaths requires further investigation. This work highlights the need of health surveillance systems for a better understanding of the influenza impact.
Key messages:
- Lower burden of influenza is found in seasons with A(H1) co-dominance. Higher burden of influenza is found in seasons with A(H3) circulation.
- Health surveillance systems are essential to provide data for a better understanding of the epidemiology and extent of seasonal influenza.