Influenza burden in Portugal: seasons 2012-13 to 2016-17

DEP
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## Summary

**Influenza burden in Portugal**

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Background

Why do we need to estimate the burden of influenza?
Objectives

Estimate seasonal influenza burden in Portugal from 2012-13 to 2016-17 using registry and surveillance data.
**Methods**

**Time span**

- *Seasons 2012/13 to 2016/17*
- *October (week 40\textsuperscript{th}) to May (week 20\textsuperscript{th})*
- *Epidemic periods only*

Epidemic periods versus Entire season:
dominance of other respiratory virus outside epidemic periods $\rightarrow$ Influenza burden overestimation
Methods

Data sources

- National Hospital Discharge Database
- Laboratory Network for the Diagnosis of Influenza
- Surveillance System
- FluMoMo

Mortality

Hospitalized
SARI positive for influenza (SARIFLU)

Primary healthcare
ILI positive for influenza (ILIFLU)
Results

Intensity

ILI incidence rate
Season/Week

B/A(H1)
A(H1)/A(H3)
B/A(H3)
A(H3)
A(H1)
## Results

**Lower burden: A(H1)**

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<tbody>
<tr>
<td>A(H3)</td>
<td>6,4</td>
<td>38,8</td>
<td>29,8</td>
<td>1,3</td>
<td>99,6</td>
</tr>
<tr>
<td>A(H1)</td>
<td>42,3</td>
<td>59,7</td>
<td>4,2</td>
<td>90,4</td>
<td>0,2</td>
</tr>
<tr>
<td>B</td>
<td>51,3</td>
<td>1,3</td>
<td>66,0</td>
<td>8,3</td>
<td>0,2</td>
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<tbody>
<tr>
<td></td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>6</td>
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<tbody>
<tr>
<td>SARIFLU</td>
<td>977</td>
<td>433</td>
<td>5030</td>
<td>158</td>
<td>4898</td>
</tr>
<tr>
<td>ILIFLU</td>
<td>10283</td>
<td>5289</td>
<td>6814</td>
<td>5240</td>
<td>6771</td>
</tr>
</tbody>
</table>

**Higher burden: A(H3)**

1899
Results:
Influenza burden pyramid

**Mortality**

**SARIFLU**
Hospitalized severe acute infections

**ILIFLU**
Medically attended influenza cases in primary care

- Mortality: 2,299
- SARIFLU: 6,880
- ILIFLU: 31,985

10^5:
- 22,1
- 66,2
- 307,9
Results

Mortality

**SARIFLU**
Hospitalized severe acute infections

**ILIIFLU**
Medically attended influenza cases in primary care

| No. of medical students in Lisbon University | 2,299 |
| No. of workers in PT of the largest hydroelectric | 6,880 |
| Half of the capacity of the largest stadium in Portugal | 31,985 |
Limitations

- Underestimated ILIFLU
- Direct comparisons
- Case definitions
- Data sources
- SARI delay
Conclusions

• Lower burden of influenza: seasons with A(H1) virus circulation dominance

• Higher burden: seasons with influenza A(H3) virus co-dominance
Thank you, for your attention!