RESPIRATORY VIRUSES IN THREE CONSECUTIVE SEASONS (2012-2014)

Foundation for the Promotion of Health and Biomedical Research of the Valencian Community (FISABIO)
Sites contribution I

% ST. PET. | TURKEY | VLC | FOR | OVERALL
---|---|---|---|---
All ages, all viruses | All ages, all viruses | All ages, all viruses | Under 18, all viruses (except CoV and BoV) | All ages, all viruses
Recorded: 6790 | 1981 | 22714 | 1362 | 32847
Included: 5618 | 1221 | 9318 | 427 | 16584
Included patients with laboratory result
N=16584 (100%)

Sites contribution II

- St. Petersburg: 5618 (34%)
- Valencia: 9318 (56%)
- Fortaleza: 427 (3%)
- Turkey: 1221 (7%)
Flowchart

Recorded: 32847 (100.00%)

Exclusion criteria:
- Non-resident: 291 (0.89%)
- Institutionalized: 1529 (4.65%)
- Previous discharge <30 days: 3229 (9.83%)
- Unable to communicate: 1471 (4.48%)
- Not giving consent: 1141 (3.47%)
- No ILI symptoms >=5 years old: 5960 (18.14%)
- Symptoms onset >7 days: 2504 (7.62%)
- Onset of symptoms to swab >9 days: 38 (0.12%)
- Inadequate or lost sample or sample not taken: 129 (0.39%)

Included with laboratory result: 16584 (50.49%)
Gender distribution by season and PCR result

<table>
<thead>
<tr>
<th>Season</th>
<th>Positive Females</th>
<th>Positive Males</th>
<th>Negative Females</th>
<th>Negative Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Season 2012/13</td>
<td>593 (44%)</td>
<td>745 (56%)</td>
<td>1108 (43%)</td>
<td>1482 (57%)</td>
</tr>
<tr>
<td>Season 2013/14</td>
<td>737 (44%)</td>
<td>920 (56%)</td>
<td>1761 (44%)</td>
<td>1938 (56%)</td>
</tr>
<tr>
<td>Season 2014/15</td>
<td>1761 (45%)</td>
<td>2128 (55%)</td>
<td>2458 (56%)</td>
<td>2458 (56%)</td>
</tr>
</tbody>
</table>
**Age distribution by season and PCR result**

### Season 2012/13
- **Positives** (median age 4.84 y.o.)
  - ≥ 65 years: 235 (18%)
  - 18-64 years: 339 (25%)
  - 5-17 years: 92 (7%)
- **Negatives** (median age 44.52 y.o.)
  - ≥ 65 years: 1004 (39%)
  - 18-64 years: 487 (19%)
  - 5-17 years: 112 (4%)

### Season 2013/14
- **Positives** (median age 4.24 y.o.)
  - ≥ 65 years: 312 (19%)
  - 18-64 years: 371 (22%)
  - 5-17 years: 121 (7%)
- **Negatives** (median age 54.29 y.o.)
  - ≥ 65 years: 1119 (41%)
  - 18-64 years: 683 (25%)
  - 5-17 years: 141 (5%)

### Season 2014/15
- **Positives** (median age 4.10 y.o.)
  - ≥ 65 years: 1042 (27%)
  - 18-64 years: 499 (13%)
  - 5-17 years: 329 (8%)
- **Negatives** (median age 56.59 y.o.)
  - ≥ 65 years: 1935 (44%)
  - 18-64 years: 904 (21%)
  - 5-17 years: 309 (7%)
Viruses relative impact (2012-2014)

- Positives: 42%
- Negatives: 58%

- RSV: 21%
- A(H1N1): 10%
- A(H3N2): 18%
- A not subtyped: 2%
- B/Yamagata: 10%
- Mixed influenza infection: 4%
- Mixed respiratory infection: 5%
- RhV/enterovirus: 13%
- PIV: 2%
- BoV: 2%
- AdV: 4%
- HMPV: 3%
- CoV: 6%
Distribution of viruses by epidemiological week

Season 2012/13

Season 2013/14

Season 2014/15

Legend:
- H1N1
- B/Yamagata
- RSV
- adenovirus
- rhinovirus/enterovirus
- H3N2
- B/Victoria
- coronavirus
- bocavirus
- metapneumovirus
- parainfluenza
- A not subtyped
- B not subtyped
- mixed respiratory infection
- mixed influenza infection
Seasonality I

Season 2012/13

Season 2013/14

Season 2014/15
Seasonality II

Season 2012/13
A(H1N1)  A(H3N2)  B/Yamagata

Season 2013/14
RSV  CoV  RhV/enterovirus

Season 2014/15

Probability

.008936  .00695  .004964  .002979  .000993

.012354  .009609  .006863  .004118  .001373

.013905  .010815  .007725  .004635  .001545
Distribution by age group I

Distribution of respiratory viruses by age group

- 0% - 100%
- 0 - <5 yrs
- 5 - <18 yrs
- 18 - <65 yrs
- >=65 yrs

- Mixed influenza infection
- Mixed respiratory infection
- Rhinovirus
- Parainfluenza
- Bocavirus
- Adenovirus
- Metapneumovirus
- Coronavirus
- RSV
- B not subtyped
- B/Victoria
- B/Yamagata
- A not subtyped
- A(H3N2)
- A(H1N1)
Distribution by age group II

Pooled 12/13, 13/14 and 14/15
RSV: Age and gender

**Age**
- 0 - <5 years old: 24.36
- 5 - <18 years old: 4.7
- 18 - <65 years old: 1
- >=65 years old: 1.97

**Gender**
- Male: 1
- Female: 0.93

Crude OR
Rhinovirus: Age and gender

**Age**

- 0 - <5 years old: Crude OR 3.29
- 5 - <18 years old: Crude OR 3.21
- 18 - <65 years old: Crude OR 1.6
- >=65 years old: Crude OR 1

**Gender**

- Male: Crude OR 1
- Female: Crude OR 0.92
Rhinovirus: Comorbidities by age group

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Crude OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 5m</td>
<td>1 1 2 3 4 5</td>
</tr>
</tbody>
</table>
Coronavirus: Age and gender

**Age**
- 0 - <5 years old
- 5 - <18 years old
- 18 - <65 years old
- >=65 years old

**Gender**
- Male
- Female

Crude OR values:
- Age:
  - 0 - <5 years old: 1.76
  - 5 - <18 years old: 1.42
  - 18 - <65 years old: 1.52
- Gender:
  - Male: 4
  - Female: 1.02
Coronavirus: Comorbidities by age group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>0 – 5m</th>
<th>6 – 11m</th>
<th>12 – 23m</th>
<th>24 – 35m</th>
<th>36 – 47m</th>
<th>48 – 59m</th>
<th>5 – 17y</th>
<th>18 – 64y</th>
<th>≥65y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude OR</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number of comorbidities</td>
<td>0 – 5</td>
<td>6 – 11</td>
<td>12 – 23</td>
<td>24 – 35</td>
<td>36 – 47</td>
<td>48 – 59</td>
<td>5 – 17</td>
<td>18 – 64</td>
<td>≥65y</td>
</tr>
</tbody>
</table>
Thank you for your attention.