RSV Pilot Study: Seasonality

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<table>
<thead>
<tr>
<th>Countries</th>
<th>Epi-week</th>
<th>RSV testing result</th>
<th>Influenza Testing Result</th>
<th>Total included in the analysis</th>
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<td>Total</td>
<td>216</td>
<td>51</td>
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RSV & Influenza Seasonality (Argentina)

The graph shows the percentage positivity of RSV and influenza over a period of 49 weeks. The green line represents RSV positivity, which peaks during the winter months. The blue line represents influenza positivity, which also peaks during the winter months but is more consistent throughout the year. The graph indicates a seasonal pattern with peaks in the winter months and troughs in the summer months.
Australia

- RSV Negative
- RSV Positive
- Percent RSV Positivity

Number vs. RSV % Positivity

Seasons: Summer, Autumn, Winter, Spring
RSV & Influenza Seasonality (Australia)
Brazil

- **RSVNegative**
- **RSVPPositive**
- **% RSV Positivity**

The graph shows the number of RSV cases and the positivity rate across different seasons in Brazil. The x-axis represents different years, with years from 2011 to 2043 labeled. The y-axis represents the number of cases and the positivity rate, with scales for both.

- **Seasons**: Summer, Autumn, Winter, Rains.
Brazil

Graph showing the % Positivity of RSV and Influenza over time, with peaks during winter months.
RSV & Influenza Seasonality (Chile)
Egypt

Number of RSV cases over time in Egypt, showing seasonal variation.

- **RSVNegative**
- **RSVPositive**
- **% RSV positivity**

- **Seasons**: Winter and Summer

The graph illustrates the number of RSV cases during different seasons, with a peak in Winter and a lower count in Summer. The percentage positivity rate is also indicated on the graph.
Distribution of Influenza and RSV among 5 sentinel pneumonia sites Egypt July 2016- November 2017 (459 specimens)

- Flu A/H3N2
- Flu- B
- RSV

Percent RSV Positive
Percent Inf Positive

Type of respiratory pathogen

Percent positive

Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov

2016 2017
India

- RSV Negative
- RSV Positive
- % RSV Positivity

Seasons:
- Winter
- Summer
- Rainy
- Autumn
Mongolia

Number

RSV Negative

RSV Positive

% RSV Positivity

Winter Spring Summer Autumn

RSV % Positivity

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 21 22 23 24 25 26 27 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

RSV Negative

RSV Positive

% RSV Positivity
RSV & Influenza Seasonality (Mongolia)
Mozambique

Number

Rainy

Winter

RSVNegative

RSVPositive

% RSV positivity

RSV % Positivity
RSV & Influenza Seasonality (Mozambique)
Russian Federation

The chart shows the number of RSV cases (yellow bars) and the percentage of RSV positivity (red line) from January 1 to December 31, 2015. The x-axis represents the months of the year, with winter months in blue and summer months in red. The y-axis represents the numbers of cases (left side) and the percentage of positivity (right side). The chart indicates a higher prevalence of RSV cases and positivity during winter months compared to summer months.
Russian Federation: RSV & Influenza Seasonality

The graph shows the percentage positivity of RSV and Influenza over the weeks of the year. The positivity peaks in the winter months and drops significantly in the summer months. The graph is marked with the seasons: Winter, Summer, and Winter again.
RSV & Influenza Seasonality (South Africa)
RSV & Influenza Seasonality (Thailand)
Summary

• A clear seasonality and distinct peaks of RSV activity were observed in
  ❖ Chile (winter and rainy season)
  ❖ Cote d'Ivoire, India, Mozambique and Thailand (rainy season)
  ❖ Mongolia and Russian Federation (winter months)
  ❖ Australia (winter/spring), Brazil (winter followed by the rainy season), Mongolia (winter)
• Argentina and South Africa have RSV throughout the year
• RSV season mainly coincides with the rainy season or winter months
RSV and Influenza activity overlap

- Mozambique: RSV in the rainy season & influenza during the winter
- Thailand influenza is observed throughout the year.
- Argentina and South Africa in 2017 had shorter influenza seasons in comparison with RSV
Thank you