mRNA Vaccine Effectiveness (VE): 1st Dose

**Population:** Community-based, 70+ year olds  |  **Research method:** Test-negative design*  |  **Study period:** April - May 2021

During peak Alpha and Gamma variant wave in BC

**Summary**

*VE adjusted for age, sex, epi week and provincial health region with 95% Confidence Intervals

**Sample population**

2 out of 3 SARS-CoV-2 infections prevented

**Time period**

Variants of concern (VoC) sample prevalence in BC (all age groups)

**Results | mRNA 1st dose VE**

70+ yr old community-based population in BC

<table>
<thead>
<tr>
<th>Vaccine Effectiveness</th>
<th>Non-VoC</th>
<th>Alpha (B.1.1.7)</th>
<th>Gamma (P.1)</th>
<th>Overall combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>72%</td>
<td>67%</td>
<td>61%</td>
<td>65%</td>
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*Policy implications*

These BC estimates are the first globally to show that a single dose of mRNA vaccine protects against the Gamma variant. Substantial 1st dose protection in older adults reinforces the option to defer the 2nd dose where vaccine supply is scarce and broader 1st dose coverage is needed.

Research led by Dr. Danuta Skowronski and the BCCDC Influenza and Respiratory Pathogens Team.

* This research method, "Test-negative design", was co-developed by Dr. Skowronski at BCCDC and is now used around the world for influenza and COVID-19 VE monitoring.

Publication: https://www.medrxiv.org/content/10.1101/2021.06.07.21258332v1